California's Small Town Doctors

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California State Department of Health
Sacramento, California
1976

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1. The Case of the Disappearing Physician

Although the number of physicians being graduated by the nation's medical schools is increasing faster than the general population (Stimmel, 1975, p. 69), the controversy continues over the question of whether a doctor shortage exists (Ginzberg, 1969, pp. 100–110). The difficulty in resolving this issue involves the questions of what complement of medical personnel is required to provide adequate medical care for a given number of people, how physician-population ratios are to be interpreted, how trends in specialization and forms of medical practice affect medical practice, and how trends in the development of new health professionals will affect physician productivity (Schonfeld, et al., 1972; Stimmel, 1975; Kissick, 1968; Fein, 1967). On the other hand, it is very much clearer that despite the growing number of physicians in the United States their geographic distribution is extremely uneven. Today the physician is concentrated in the urban center, and this trend is continuing. In California, for example, the physician-population ratio in 1963 for the major metropolitan counties was 173 physicians per 100,000 population compared to 73 physicians per 100,000 for isolated rural counties. In 1971 the contrast was 195 compared to 89 physicians per 100,000, respectively (Jones, 1973).

The unequal distribution of physicians in urban compared to nonurban areas has resulted from the combined forces of shifts in population, style of life in urban compared to nonurban communities, and changes in the medical profession and medical practice. As California's population has grown, almost doubling in size between 1950 and 1970, its population has also become more urban. By

1970, 91 percent of its residents were living in urban centers (USC Pop. Lab., 1971). Doctors have been a part of this shift, going where the prospective patients are but at a higher rate. By 1971 this concentration effect showed 95.6 percent of California's physicians located in the metropolitan counties, which understates the contrast because many of the remaining doctors are practicing in urban places even though their county is considered rural (Jones, 1973). A basic force behind this geographic concentration has been the development of widespread specialization in medical practice (Stevens, 1971). In 1931 the full-time specialists accounted for 17 percent of the practicing physicians in the United States. By 1969 this proportion had grown to 77 percent, and in California it reached 81 percent in 1972 (Stevens, 1971, p. 181; Jones, 1972, p. 7). This type of practice in turn tends to require more elaborate facilities and equipment, medical consultation arrangements, and a large and well-financed population. In the nonmetropolitan areas the specialist is most prominent by his absence. Residents in those areas who require local care depend on general practitioners.

The decline in the proportion of general practitioners among the State's physicians is paralleled by an even more rapid decline in the number of nonmetropolitan general practitioners. The explanation is that these doctors are not being reinforced by newly trained physicians. Therefore, they tend to be an older group than the urban doctors and consequently are retiring and dying in greater proportions. The result is the great and growing disparity in the numbers of physicians practicing in nonmetropolitan areas of California compared to the urban zones. Families in the former areas increasingly face a situation in which specialists, such as obstetricians and pediatricians, are

generally unavailable except in urban centers, while the few general practitioners who are locally available are an aging group, less likely to be recently trained, and declining in numbers.

The decline of the small town and rural physician is a trend that has been long-recognized and debated at length. While solutions to this problem have been slow in coming, at least the number of proposed remedies has increased in recent years. Most of these remedies can be viewed as suggestions for attracting doctors to nonmetropolitan areas, for helping doctors in these areas, or for replacing such doctors. The replacement ideas are based mainly on the development of new health professionals, such as the nurse practitioner or the physician extender (Bicknell, 1974; Robbins, 1972; Reid, 1975). The underlying assumption is that the physician cannot be attracted to remote or sparsely populated areas and the proposal is for specially trained nurses or other specially trained health auxiliaries to provide limited medical care, either under close medical supervision or more independently. The ideas for helping doctors tend to be communication ideas. One set of these takes the form of providing assistance in diagnosis, treatment, and other aspects of patient care by providing access to useful information or more expert colleagues via communication technology, i.e., television, telephone, and computers (Rushmer, 1975, p. 117-120). Another suggestion for communication assistance involves transportation which takes the patient to where the doctor is located.

The ideas for attracting physicians have been many and varied over the years. They range from providing or subsidizing office facilities to guaranteeing minimum incomes, building local hospitals, offering low-cost loans, providing

medical education subsidies, supplying inexpensive housing. None of these efforts has been especially successful. More recently proposals have been made that would shift the emphasis from attraction to compulsion. Doctors might be required as a condition of licensing to practice in underserved areas for a period of time, such as two years. Other proposals would require medical schools receiving federal support to create training programs in shortage areas or training programs of the type that is most relevant to shortage areas, such as family practice (Stimmel, 1975).

In view of the disappointing results of most efforts to attract physicians to shortage areas and the traditional reluctance to regulate location, which carries its own costs and risks, there has been an intensive search for explanations of the individual location decision, which might suggest ways of influencing such decisions. These studies are now quite numerous, their approaches quite diverse, and their findings subject to varied interpretation. Nevertheless, they do suggest that the decision for an urban location follows from a set of professional influences (a medical center, other medical resources, numerous colleagues, an interesting case load, a practice that allows free time) and a set of environmental-life style influences (urban background, urban education, friends and relatives located in urban places, urban leisure interests) (Lave, et al., 1975). The decision for a nonmetropolitan practice similarly seems to reflect these same two general factors, but the specific elements differ or are reversed with the environmental-life style cluster the more important one. In this latter case the physicians tend to have nonurban backgrounds, their friends and relatives more often are located in nonurban places, they value the nonurban setting highly

as a place to live and raise their children, they are attracted to nonurban recreation, and they attach less importance to the professional considerations listed above (Lave, et al., 1975). Since most of these influences are relatively unalterable, the conclusion generally drawn is that medical schools should attempt to select more students who have the nonurban characteristics identified by these studies and hope many of them will select a nonurban area for their practice.

Not only are replacements not being attracted to the nonurban areas, but also the doctors in such locations are leaving. To a considerable extent such departures represent a change from general to specialist practice (Ackerson and Murray, 1974, p. 52). In this and other studies of the shift from nonurban general practice to urban specialization (Crawford and McCormack, 1971; Harvey, 1973) the major reasons doctors gave to explain their change were overwork, the extreme range of medical problems that required attention, isolation and the consequent lack of colleagues for consultation purposes, and to a lesser extent limitations in local hospital facilities and local community recreational opportunities. These are the problems frequently identified in discussions of the plight of the nonurban practitioner. Thus, according to Rushmer (1975, p. 116):

> Rural physicians are often solely responsible for large populations spread over vast areas, so they tend to be overburdened and under unremitting pressure. Their remuneration is small compared with that of their urban colleagues, and they must function without the convenience and support of modern hospitals and sophisticated health facilities and services. They deal with a very large number of routine, mundane, and even trivial problems that are neither intellectually stimulating nor professionally satisfying. Isolated from medical centers, they quickly fall behind the rapid surges of scientific progress. They have difficulty finding substitutes to allow for vacations or periods of study and rarely have time to enjoy the financial fruits of their efforts.

Such statements seem to make it all too evident why doctors congregate in the cities and avoid the small towns and countryside like the plague. However, there are doctors practicing outside the cities who are not just surviving but, in fact, thriving. How are such doctors able to cope with all of the well-known problems of small town, or rural, medical practice? Unfortunately, much less is known about the situation and views of the doctors who have remained in the small towns. Certainly there has been much general discussion and writing about rural doctors, but there have been relatively few studies, and most of these have focused on the issue of quality of medical care in such practices, for their interest has been in problems of medical care rather than manpower problems (e.g., Peterson, et al., 1956). Consequently, it is not clear that the preferences of young doctors about to make their initial location decision include an accurate appraisal of the small town medical practice situation. Neither is it certain that the views of those doctors who have left the small towns reflect the views of those who have remained. It is equally possible that this departed group is quite different and unrepresentative of surviving small town physicians.

The present study seeks to fill this gap in the current physician location literature by investigating the physicians who have continued to practice medicine in small towns. Its orientation is basically descriptive. The central question addressed by the study is whether the conditions of rural medical practice repeatedly identified in the literature, as represented in the previous quotation from Rushmer, accurately described the situation of the experienced small town doctor in California and, if they do, whether such conditions are in fact experienced problems. It is possible that the

conditions of rural practice are not everywhere the same. It is also possible that some small town doctors have developed ways of coping with problematic conditions. It is even possible that what is seen as a problem of rural medical practice is a definition mainly in the eye of an urban beholder and is not a view shared by the small town doctor. Since a variety of proposals are currently being considered as well as implemented with respect to training health professionals and organizing or reorganizing medical care to alleviate the physician shortage in nonurban areas, it seems appropriate to take a closer look at the small town doctor to determine whether the prevailing negative views of small town medical practice, which in turn are reflected in current medical care and medical manpower planning, training and organizing, are accurate.

This investigation of the small town doctor concentrates on describing his current working and living situation. By focusing on the doctor's situation the intent is to explore the everyday realities of small town professional life. This requires a description of his usual activities and relationships as well as his views on these activities. Three aspects of the doctor's situation were chosen for attention: his practice situation, his professional situation, and his community situation. These three encompass the larger proportion of important influences, both positive as well as negative, that have been identified in prior research as distinguishing small town primary care practice. They can be viewed as defining the world of work, of professionalism, and of social life of the physician. Regarding the practice situation, information was sought concerning number of patients seen, how the

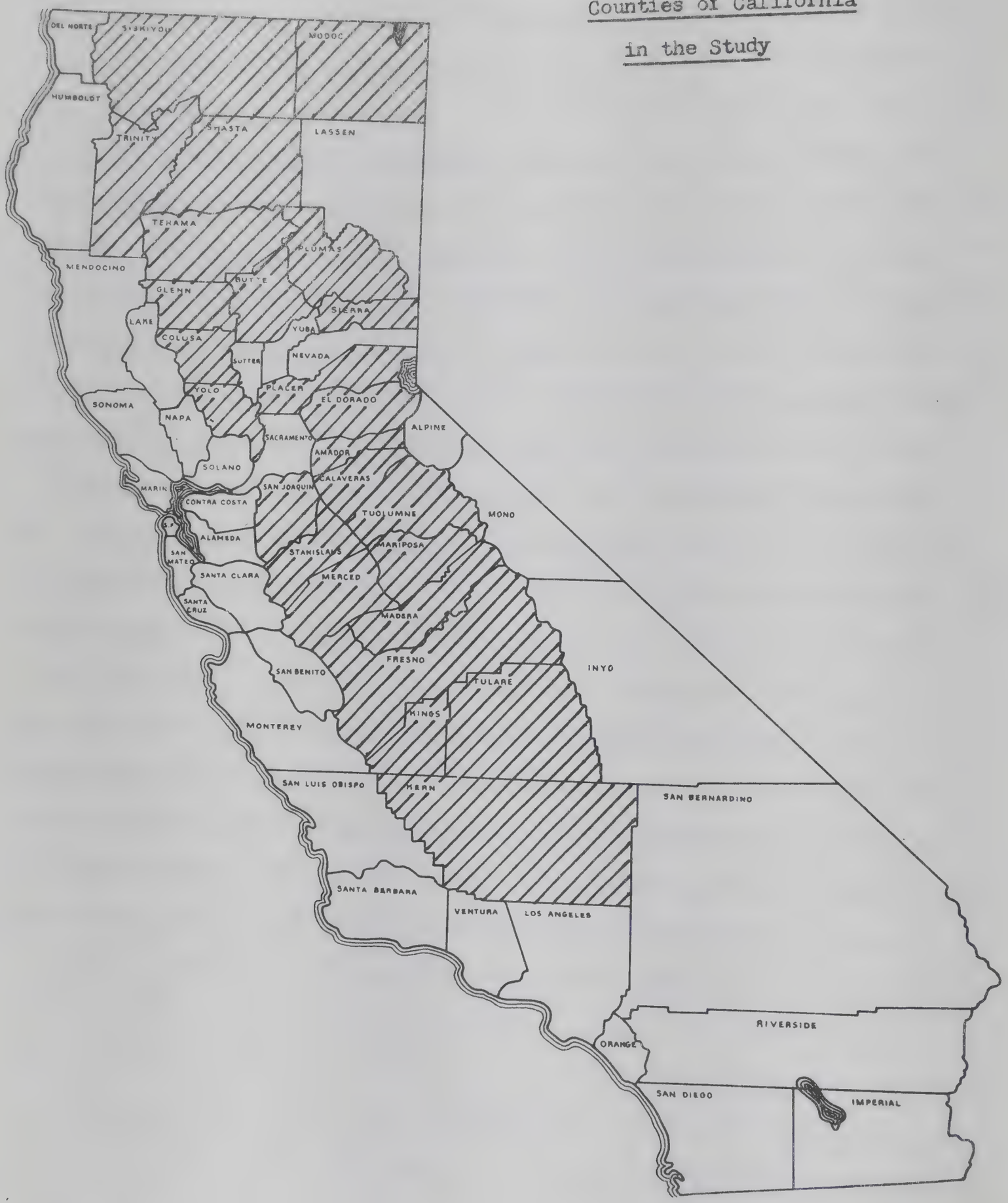
physician distributed his time, number of hospital appointments, number and types of assisting personnel, and related matters. The professional situation is reflected in the type and extent of contact with other doctors, participation in local medical society, and the extent of such professional activities as attending medical conventions, taking post-graduate course work, or reading professional journals. The community situation concerns the type and extent of participation in community activities, having close friends in the community, and features of the community considered important by the physician. In addition, information was sought on how the physician viewed the limitations as well as the advantages of his current practice, professional, and community situation. The intent here is to explore how his views on his situation relate to the realities of that same situation. For example, do doctors with few colleague relations consider lack of colleagues to be a problem, or is there no relation between these two different aspects of colleague relations?

While the research concentrated on the doctor's situation and views, the fact that several sets of related data were available in printed form made it possible to extend the problem in two other directions. First, several items of information that could be used to interpret the career of the physician, such as year of licensing and board certification, were taken from American Medical Association directories. These were added to related information obtained in the interviews that could be used to characterize and differentiate the career paths of these doctors that brought them to a small town. Second, census information was available on the communities which was selectively used to obtain some measures of community population characteristics.

In addition hospital data was available, which was used to identify the hospital resources of each community. This community information is presented in Appendix 1.

The study is concerned with the mainstream of small town doctors. Only primary care physicians, i.e., general practitioners, family practice physicians, internists, obstetricians, and pediatricians, were included. Second, only nonurban physicians were included. Since it was discovered early that physicians tend to congregate in a few towns whatever the size of those towns (see Appendix 1), it was decided that a low concentration of physicians was more important in identifying the most rural of all nonurban physicians than selecting a particular population size to identify a nonurban setting. A limit of five practicing physicians, whether or not in primary care, was chosen to locate the more rural of the nonurban physician population (see Appendix 2). Third, both the young doctors just entering practice as well as the doctors approaching retirement were eliminated. Selecting doctors between the ages of 35 and 60 was done to obtain a group with enough experience of the problems as well as rewards of small town practice but also with enough working years left to make relocation a real alternative. Finally, in order to work in a manageable geographic area as well as not overlap with related research, the coastal counties and the southern counties were omitted from consideration (see Map of California Counties).

Counties of California in the Study



The basic information reported here was obtained by an open-ended interview with each doctor in the Fall of 1975. The goal was to have the doctors describe their situation and their views in their own words (see Appendix 2). There were only 176 doctors in the 29 valley and mountain counties who met the selection criteria. Four counties had no doctors who met the criteria. Forty-eight doctors were dropped when further checking established that either they were not physicians in private practice or were not practicing in towns with 5 or fewer physicians, while 17 were no longer practicing in the area listed. This left 111 physicians who actually met the selection criteria and could be located, and 106 of these were interviewed (see Appendix 2). The interviewers were given a basic set of questions to ask, but the interviews, ranging from 30 minutes to 1½ hours in length, were more like conversations in which the issues were defined by the doctors rather than the interviewer. In addition, a short questionnaire was left with each physician to be filled out at his convenience and returned by mail. The questionaire contained a series of specific questions requiring short answers that could be more efficiently answered without the interpolation of an interviewer. Thus, while the interviews provided the basic information in the discussions that follow, they are supplemented both by the questionnaire and published data. In this way a large set of topics could be explored with this small group of rather special doctors.

In the six sections that follow information is first presented on the careers by means of which these doctors have come to be where they presently are: the small towns of California. The next three sections deal with the core information obtained on each doctor's present activities: his medical

practice situation, his professional situation, and his community situation. How these doctors view their practices, the pluses as well as the minuses, is considered in the next section. In the final section the implications of the findings of the study for the problem of the disappearing rural physician are discussed and some suggestions for using the findings are presented.

2. The Doctors and Their Careers

Who are the doctors practicing in California's small towns? While the focus of this study is the present, events of the physician's past have influenced and continue to influence his current situation. Thus, the physician in training encounters a number of strategic choices that will make it more or less likely that he will become a small town primary care practitioner. The first is his choice of medical school and where it is located and how research oriented or specialist oriented the school is. A second is his internship and residency, if any, and whether these are in specialties or general practice and, more recently, family practice. A third is what form of practice he enters on completion of training: solo, a partnership, a group practice, or a salaried position. At each of these career points the options either enhance or limit the chance that the person will start a primary care practice in a small town. These are not unalterable choices, however, for even an urban specialist can change his mind and relocate to a small town to practice general medicine. Biographical information gives us some indications of the kinds of doctors and careers to be found in the group studied.

Who are the 106 physicians? They are overwhelmingly married (91 percent) and male. Only two female physicians are present in this group of doctors. Their age distribution is given in Table 2–1. This distribution as well as other career information has been influenced by the study's sampling criteria. Physicians under age 35 or over age 60 were excluded. The reasons were to eliminate the younger physician with little experience, to eliminate the elderly physician approaching the end of his career, and to obtain a group of

experienced small town doctors, well versed in the problems of this type of practice but with years of medical work still ahead of them. Within the age range selected there is both a marked concentration on certain ages and some skewing. The single category of ages 50–54 contains 42.5 percent of all the doctors. Doctors in their 50s make up 66 percent of the sample, while those under 45 comprise only 16 percent. That this is an older group of physicians is consistent with most studies of rural small town doctors (Mott and Roemer, 1948, pp. 170–171; Hassinger, et al., 1975), and the basis for considerable pessimism about the medical care future of rural and small town populations as represented by its current doctors.

TABLE 2-1
PERCENT DISTRIBUTION OF PHYSICIAN AGE

Age	Number	Percent
35-39	11	10.4
40-44	6	5.7
45-49	16	15.0
50-54	45	42.5
55-60	28	26.4
TOTAL	106	100.0

The medical school has many influences on the developing physician. Of special importance here is that it affects the location of practice. Doctors usually go into practice in the same state or geographical area in which they have received their medical education (Mawardi, 1965; Champion and Olsen, 1971). California, however, has long been an importer of people (Morrison, 1971), including physicians. Only 43 percent of the doctors studied received their medical education in California medical schools. Loma Linda and the University of California at Irvine (the former California College of Medicine)

are the two medical schools most frequently represented and account for almost one-third (32 percent) of the physicians studied. A little over 50 percent of the doctors were educated in out-of-state schools, while 6 percent are graduates of foreign medical schools.

This group of 106 doctors graduated from medical school between 1941 and 1968. The mean year of graduation was 1954 with a standard deviation of 7. In fact, one-third of them graduated in one five-year period, 1951–55. The period of medical licensing for these physicians is one year later than graduation, 1942-1969. This suggests that many of the physicians trained in out-of-state schools planned to come to California following graduation and probably interned in the State. This is supported by the fact that 80 percent of these doctors indicated that they have never practiced in any state besides California.

Only physicians practicing medicine full-time and with a primary care specialty were included in the study. As shown in Table 2–2 most of the doctors have general practice as their self-declared primary specialty (82.1 percent) and have no secondary specialty (62.3 percent). Ten percent of these general practitioners were originally trained in osteopathy. The only other significant primary specialty is family practice (9.4 percent), the contemporary equivalent of general practice. Although a few of these doctors are identified with other, even unusual, primary specialities, all of them, including the one psychiatrist, provide a significant amount of general medical care. Expectedly, general surgery is one of the largest secondary specialties, for it is often a close adjunct to general practice in rural small town areas.

TABLE 2-2

PERCENT DISTRIBUTION OF PHYSICIAN SPECIALTY (PRIMARY AND SECONDARY)*

Specialty	Primary		Secondary	
	Number	Percent	Number	Percent
General Practice	87	82.1	1	0.9
Internal Medicine	3	2.8	5	4.7
Obstetrics-Gynecology	1	0.9	1	0.9
General Surgery	3	2.8	9	8.5
Family Practice	10	9.4	-	-
Anesthesiology	-	-	4	3.8
Public Health	-	-	2	1.9
Psychiatry	1	0.9	-	-
Other	1	0.9	18	17.0
None	-	-	66	62.3
TOTAL	106	100.0	106	100.0

*Source: American Medical Association, 1973 American Medical Directory, 1974.

Very few of these doctors have taken advanced training and passed the examinations to be certified as specialists. Six (5.7 percent) are Board certified in family practice, 3 (2.8 percent) in internal medicine, and 3 (2.8 percent) in general surgery, or 11.3 percent in all. On the other hand, the recent development of family practice as a kind of general practice specialization is hinted at even in this small group.

Because it is apparent that physicians are leaving small town practices as well as avoiding them (Crawford and McCormack, 1971; Harvey, 1973), the question of whether mobility and change is characteristic of small town doctors becomes a matter of some importance. It turns out that the doctors in this study have been practicing medicine in their towns on the average for 15 years ($\bar{x}$ = 14.8). Their tenure in town ranges from 1 to 30 years with physicians distributed rather evenly throughout this period except in the mid-

years (see Table 2–3). This apparently lengthy tenure in a single town has to be tempered by the fact that the average doctor is 52 years old and has probably been in practice for over 20 years. In fact this group of doctors has practiced on the average in 2.0 communities. This suggests that the pattern is to initiate practice in one town for a few years and then with more experience and crystallized interests to relocate to a second town and stay. In this case the average figure is misleading, for there are actually four distinct groups of doctors with respect to the number of towns they have practiced in during the course of their career. The largest, 35.8 percent, has practiced in only one town; the second largest, 33.7 percent, has practiced in two towns; 20.0 percent has practiced in three; while 10.5 percent has practiced in 4-6 towns. This range might be thought to be largely a reflection of age. The older the doctor the more opportunities, if not more stimulation, to change location of practice. In fact there is no relationship between age and the number of communities in which the doctor has practiced. If anything, the data show a tendency for younger doctors to have practiced in three or more communitites, while the older ones tend to remain in one. Similarly, there is no relation between the number of communities practiced in and year of graduation from medical school, which might be seen as a more appropriate indicator than age or length of time in medical practice. Thus, there appear to be several distinct mobility patterns among the physicians studied. One is the physician who selects his town and has remained there throughout his professional life. A second is the two-town pattern, which may reflect an initial temporary or even poor choice, corrected by a second move that becomes a stable situation. The third is the mobile physician, staying a few years in one town, then on to another for a few years, and then on to a

third, a fourth, and so on. Perhaps the most suggestive finding here is that it is, if anything, the younger doctors who are moving from town-to-town although the relationship does not quite reach statistical significance (see Table 2-4 at end of section*). The implications of town mobility will be further explored in later sections.

TABLE 2-3
PERCENT DISTRIBUTION OF
NUMBER OF YEARS PRACTICING IN THE COMMUNITY

Years Practicing in Community	Number	Percent
1-5	17	18.2
6-10	15	16.0
11-15	10	10.6
16-20	22	23.5
21-25	17	18.2
26-30	13	13.8
	94**	100.3

** Note: Tables based on questionnaires rather than interviews include a maximum of 95 cases.

Not only are these doctors primarily general practitioners, or the more current family practitioners, their practice arrangement is primarily solo practice (82.2 percent). Only 13.7 percent have a partnership arrangement, while 4.2 percent have a group practice. These practices are essentially one-man affairs. This has not always been the case. As shown in Table 2-5, only 34.9 percent of the physicians have always practiced with the same practice arrangement and not all of these were in solo practice although most were.

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* Note: Tables not included in the text will be found at the end of the appropriate section. The probability value reported is based on the chi-square test, which has been employed as an aid to both the analysts and the readers in evaluating potential relationships in the data rather than as a test of those relationships.

Over half (51.9 percent) have changed their arrangement compared to what it is now, such as from a salaried position to solo practice. What is most striking in this table, however, is that the largest proportion of changes by far are those shifting from some form of nonsolo practice to the solo form (44.4 percent).

TABLE 2-5
PERCENT DISTRIBUTION OF PHYSICIANS
BY PREVIOUS PRACTICE ARRANGEMENTS

	Number	Percent
Always the same arrangement	37	34.9
Nonsolo to solo	43	40.6
Solo to nonsolo	8	7.5
Salaried to solo	4	3.8
Nonresponse or did not mention	14	13.2
TOTAL	106	100.0

Stability vs. change in practice arrangement in turn is connected to stability vs. change in location of practice. Those physicians who have always practiced in only one town throughout their careers are likely always to have had the same practice arrangement (Table 2–6), i.e., predominantly solo practice. Those who have practiced in more than one town are likely to have changed their practice arrangement, specifically from some form of nonsolo practice to solo practice. This suggests that changing the community location of medical practice for these physicians is, among other things, a way of getting out of nonsolo and into solo practice. This notion receives additional support from the importance that independence has in the views of these doctors (see Section 6), although other factors, such as practice style conflicts, are also involved in this change.

In summary, the doctors practicing in the rural small towns of this study are older general practitioners. There is a general absence of certified specialists among them, but medical specialists are known to be concentrated in the cities of this country (Rushing, 1975, pp. 99-110). Almost three-fifths received their medical training in other states, but four-fifths of them began their practice of medicine here in California. They are a relatively stable group with respect to the location of their practice. On the average they have been practicing for 15 years in their towns. For roughly a third of them this is the only town in which they have ever practiced and for another third it is their second community. The final third deviate from this stable pattern and are movers, having practiced in from three-six communities during their career. Significantly, it tends to be the younger doctors who are doing the moving. Finally, these doctors are overwhelmingly in solo or one-doctor practices. A little over one-third have never been in any other kind of practice, but even more importantly those that have changed their practice arrangement have changed mainly from some type of nonsolo to a solo practice. The picture that emerges for the majority of these doctors is one of considerable career stability, whose key ingredients are the practice of general medicine, solo practice arrangement, and small town location. Whatever the importance of long hours, continuously on call, repetitive work, or lack of colleagues for small town physicians generally, these potential problems do not appear to have greatly altered the orderly course of the careers of these physicians. How these problems figure in their present situation is a different matter and will be the subject of subsequent discussion.

Table 2-4
Number of Towns Practiced in
by M.D. Age (in percent)

	AGE	
TOWNSPR	Young	Old
One	33.9	42.6
Two	28.8	38.3
Three or More	37.3	19.1
	(N=59)	(N=47)

$X^2 = 4.18$; df = 2; NS* (p = .12)

Table 2-6
Tried Another Practice by
Number of Towns Practiced in

	TOWNSPR		
TRYANOPR	1.	2.	3.
Always Same	66.7	28.6	12.0
All Other	33.3 (N=39)	71.4 (N=28)	88.0 (N=25)

$X^2 = 21.21$; df = 2; p = .001

*Not Significant

3. The Practice Situation

> "I don't have any hospital patients anymore. I couldn't keep up with all the information you have to have for all the cases you put in the hospital. It was too much. I have enough in the office. I used to try. I went up to use the hospital in (X city) for eight years, but I found I was spending one and one-half hours driving every day so I quit. And I don't do any deliveries. I did for eight years, but I stopped. I just couldn't leave a busy office practice — 25 people in the waiting room — to drive to the hospital to wait for a baby. You can't." (54–21)

Small town general practitioners have been described as overworked, lacking access to hospital facilities, and confronting unmanageably large patient loads, as suggested in the above comment. They are also said to lack adequate supporting staffs, to spread themselves too thin in their work, and to receive inadequate financial reward. Since so much of the physician's time, efforts, and thinking concern his work, the conditions of work of the small town doctor figure importantly in any attempt to understand this type of practice. A small number of pioneering observational studies have provided a valuable glimpse into the working world of the general practitioner (Peterson, et al., 1956; Clute, 1963). In the present study a much more limited set of basic information was sought regarding the physician's practice, specifically the type of practice arrangement, types of office personnel, hospital use, patient care activities, distribution of practice time, and net income from practice.

Practice Arrangement

The solo, or individual, practice continues to be the typical, if not necessarily the ideal, arrangement for the practice of medicine in this country. The 1966 American Medical Association national survey reported that

60.6 percent of the nation's doctors in private practice had a solo arrangement, compared to 19.1 percent in multidoctor associations (chiefly 2-doctor partnerships), 18.5 percent in group practices, and 1.8 percent in other arrangements. Restricting the comparison to nonmetropolitan general practitioners, the proportion in solo practices increases to 62.1 percent (Theodore and Sutter, 1967). This survey also indicates that metropolitan general practitioners are more likely to have a solo practice (73.6 percent) than the nonmetropolitan general practitioner's (62.1 percent), but this difference is largely due to the fact that the nonmetropolitan general practitioner's favor 2-man partnerships twice as frequently (18.2 percent compared to 9.3 percent). A small-scale study in upstate New York shows the same trends, but at a higher level. Here 81 percent of the general practitioners are in solo practice, but the proportion rises to 86 percent for those in the urban county and drops to 77 percent for those in the rural counties (Riley, et al., 1969). These surveys are not completely comparable to the present study, but they are in line with the finding that the California small town physicians are predominantly in solo practice (82.2 percent) and that the next most frequent practice arrangement is the partnership (13.7 percent), with only 4.1 percent in group practices. This distribution may have been influenced by the way doctors were selected for study (especially the "five or fewer doctors per community" rule). Furthermore, group practices are generally thought to require not only three or more physicians but more than one specialty (Pomrinse and Goldstein, 1960). The general absence of other than general, or family, practitioners in small towns makes multispecialty groups unfeasible.

Office Personnel

The physician in private practice, including those in solo practice, is not likely to be working alone. He will have receptionists and nurses assisting him, in some cases laboratory technicians, and increasingly, bookkeepers to handle the growing third-party payment paper work. How many of what kinds of assisting personnel a general practitioner is likely to employ will depend on such factors as the volume of patients seen, how much patient care is provided in his office, availability of trained personnel, and prevailing wage rates (Warner and Aherne, 1974, pp. 45-55). Nationally, a physician practicing in a nonmetropolitan area will typically have one two-thirds-time registered nurse, one licensed practical nurse or nurses' aide, one laboratory and/or medical technician, and one secretary-receptionist (Warner and Aherne, 1974, Table 84, p. 216). These figures come from a sample of all United States' patient care physicians, rather than just general and family practitioners, and all types of practice arrangements. When the assisting personnel of the study physicians are examined, they differ expectedly in a number of respects (see Table 3–1). First, there is a single dominant pattern in the use of full-time nurse-related personnel. A little over one-half (52 percent) of the doctors studied employ one full-time nursing professional to assist him in his work. Of the rest, one-quarter (27 percent) employ two to three, a small fraction (7 percent) use four to seven, while 14 percent have none at all. The use of part-nurse-related personnel is slight, except for 18 percent who indicated that they use one part-time nurse. In contrast, the use of business-related staff is more varied. There are two modal patterns. One group of solo practitioners employs a single office assistant, while a second

employs two. Another group (21 percent) uses three to seven business-related personnel, while again a small group (10 percent) employs none. In the case of the business-related personnel there is also a greater use of part-time help. Over one-quarter of these doctors (28 percent) have one such person on the payroll and another 11 percent have two to four. Aside from nursing and business office staff, virtually no other types of personnel are encountered in these practices.

TABLE 3-1

DISTRIBUTION OF PERSONNEL BY TYPE AND NUMBER IN PHYSICIANS' OFFICES

Number of Personnel in an Office	Offices with Nursing-Related Personnel				Offices with Business-Related Personnel			
	Full-time		Part-time		Full-time		Part-time	
	Number	Percent	Number	Percent	Number	Percent	Number	Perce
one	47	52	16	18	32	35	25	28
two	16	18	2	2	30	33	8	9
three	8	9	-	-	13	14	1	1
four	3	3	-	-	3	3	1	1
five	3	3	-	-	2	2	-	-
seven	1	1	-	-	2	2	-	-
none	13	14	73	80	9	10	56	62
TOTAL	91	100	91	100	91	99	91	101

From these data it is apparent that the office staffs of these practitioners tend to be both small and rather uniform. Most of these doctors conduct their practices with the help of a single nurse and either one or two receptionist-secretaries to handle the appointment, billing, and related nonmedical care work. None of the newer paramedical types was encountered. Only a very limited range of auxiliary health occupations was identified. There is no reflection here of the current ferment in allied health, physician extenders, and team medical care (Robbins, 1972).

Hospital Use

The size and character of the physician's office staff is influenced by how much of his patient care is delivered in the hospital. In turn, the availability of adequate hospital facilities has been prominently identified as a necessary condition for attracting physicians to small towns (Williams and Uzzell, 1960). The geographical availability of hospital facilities in the large and sometimes sparsely populated areas of nonmetropolitan California can be a problematical matter. As discussed in Appendix 1, 43.4 percent of the doctors do not have a hospital in their town. Nevertheless, it is a very small minority (6.3 percent) of these general practitioners who are not currently using one or more hospitals in the conduct of their medical practice. It turns out that while there may be no hospital around the corner for many of them, for most the hospital that they regularly use is close at hand. For 42.1 percent the distance to the hospital they primarily use varies from less than 1 mile to 1 or 2 miles. For another 23.3 percent the distance is 4 to 10 miles, while 32.0 percent indicate they have to travel 11 to 65 miles.

While distance, and certainly great distance, affects use of the hospital by the doctor, the effect is not strong enough except in a few cases to influence whether or not the doctor uses a hospital but only how often he will use it. This frequency of using the hospital is very strongly related to distance between the hospital and the doctor's office. Over half of the doctors (52.6 percent) say they visit their regular hospital more than once each day and another 27.4 percent visit theirs just once a day. Only 13.7 percent report a

less than daily usage of the hospital. This means that probably almost one-quarter of these doctors daily drive 4 to 10 miles to carry out their hospital-related work, while another 15 percent daily drive over 10 miles for that same purpose. The hospital is often described as the workshop of the medical specialist, but it appears equally basic to the practices of these small town general practitioners.

Hospitals, like patients, tend to be spread thinly over large areas in rural California in comparison with urban centers. Under these circumstances, a physician may find it necessary to care for patients in more than one hospitial in the region where he practices. The small number of physicians in a region, especially specialists, may also result in a doctor seeking the assistance of a colleague for the care of a patient. One physician's comment suggests the regionalization of practice that seems to occur, while the second reflects the mutual aid that the physicians require:

> "I'm chief of staff at X Hospital, near Y town. I'm also on the staff at C Hospital and D Hospital in J (Central Valley City). I go there whenever someone needs to go in. You can practice ideal medicine here. We have all the facilities within ten miles..." (20–92)

> "Either they come here and help us or we go there and help them. A general surgeon and an orthopedist come here." (20–94)

In fact 71.6 percent of the physicians utilize more than one hospital in their professional work. Of those reporting such multiple hospital use, 34.5 percent said they use 1 additional hospital, 29.3 percent said 2 hospitals, 22.4 percent said 3 and 13.7 percent said they use from 4 to 7 additional hospitals. There are 2 primary reasons these doctors give in explanation of

such multiple hospital use: first, to assist another physician (67.6 percent) and second, to attend patients (51.5 percent). The reasons are not mutually exclusive. They do suggest different bases for utilizing several hospitals. The expected one is maintaining his practice through providing hospital care of his patients. The other is maintaining his practice by obtaining assistance from colleagues in caring for a patient. While this multiple hospital use is widespread among this group of doctors, its importance should not be exaggerated. The frequency of using membership privileges in more than one hospital is actually quite low compared to the use of the most favored hospital. Of those using one or more additional hospitals to attend patients, 62.5 percent of them do so only monthly or less often, while 90.4 percent of those assisting other doctors do so only monthly or less frequently. Thus, the actual amount of use of additional hospitals is clearly quite low even though widespread among these physicians.

Patient Care Activities

The doctors' offices with their supporting staffs and the doctors' primary hospitals with their staffs provide the settings, the facilities, and the trained personnel required to provide much of modern medical care. As one doctor put it:

> "I do office, hospital and emergency room work. I like it all, see all types of patients. I like the challenge, the satisfaction of diagnosing, treating at the local hospital. You can see the results." (27–52)

What are the results? More specifically, how much care is provided? The number of patients seen daily in either the doctor's office or his hospital ranges from 10 to 88 (mean = 38.5 patients/day). These are reports on an average working day and, thus, should be considered approximate estimates of the actual number seen on any particular day. This wide variation in patient load for this group of physicians as well as the large number of patients likely to be seen each day is consistent with other information on general practices. The American Medical Association 1973 national survey of physicians reports the average number of patients seen daily by general practitioners as 37.7 (obtained by dividing the weekly total by 5 working days) (Warner and Aherne, 1974, Table 20, p. 88). A rural Iowa study produces a comparable figure of 34 (Peterson, 1968), while a rural New York study gives one of 35.2 (obtained again by dividing a weekly total by 5) (Riley, et al., 1969). The widespread idea that small town doctors serve large numbers of patients is clearly reflected in these data.

Seeing patients in the office or hospital is not the only means of providing patient care. For many doctors the telephone is an important adjunct to patient care in the office. It can be especially useful in small towns because the physician is likely to be knowledgeable about his patients and, thus, able to assess a patient's problem and respond appropriately. As one doctor noted:

> "I know just about everybody in town. Sure it's useful. I know what's really bugging them. I know if there are money problems or marital problems. I know the pressures and stresses. It helps me to figure out what's wrong with them." (69–75)

And this kind of familiarity and knowledge in turn facilitates dealing with patients by telephone:

> "If someone calls up and says he has a pain in his chest — if I know them, I know how to take their reporting." (71–12)

Virtually all of the physicians (98.9 percent) reported using the telephone in providing medical care. The number of telephone calls received ranges from 0 to 70 with an average of 15 per day. Half the doctors (50.7 percent) report 4 to 10 calls each day, while close to one-third (31.6 percent) receive 11 to 20. The rural New York study cited above (Riley, et al., 1969) gives a comparable figure of ten telephone calls each day. The use of the telephone in dealing with patients, like the number of patients itself, varies considerably for these physicians. Some spend little time on telephone calls, while others are conducting a noticeable amount of their practice by telephone. When the distances to the doctor's office may be considerable, or when the problem may be a routine one for a well-known patient, it is often much more convenient for these doctors and their patients to arrange for their care by telephone.

Aside from providing medical services in his office, in the hospital, or over the telephone there remains giving aid in the patient's home. City doctors are notorious in recent years for rejecting home visiting and insisting that patients see them in their office or the hospital. Do small town doctors differ? Yes, according to their own statements. Almost one-third of the physicians (32.7 percent) said they made house calls several times a week or more often. Another 42.1 percent indicated they visited patients' homes

several times a month, while 24.3 percent make such visits only occasionally or less frequently. In one doctor's words:

> "The things I like are when patients are very cooperative, when they call me for the right things, when they're well-trained. . .about when something is or isn't an emergency. They come to my house. I make house calls, too — lately to little old ladies who can't get out of bed, to little old men, too." (68–13)

While most of the doctors indicate they do make house calls, once more they differ markedly in the extent of this activity. The majority of them apparently do not spend much time in this effort. This will be clearer when the different activities of the physician are compared.

Distribution of Practice Time

In order to assess the relative importance of the physician's activities, including not only patient care activities but also other efforts involved in his professional work, like consulting with other physicians, he was asked to estimate what proportion of his time he spent during an average working day on the various activities associated with maintaining his practice (see Table 3–2). As shown in these data the primary practice-related activity of these physicians is patient care in the office. The only other activitiy given any substantial amount of time is patient care in the hospital. This concentration on office care has been confirmed in other studies of rural practitioners, which find levels of office care at 69.6 percent in rural Iowa (Peterson, 1968), 71.5 percent in rural New York (Rile , et al., 1969), and 79.8 percent in rural Washington (Chamberlain and Drui, 1975). Since these

other studies exclude all nonpatient care activities, e.g., travel time, the California level would actually be somewhat higher if these activities were similarly excluded from the California series. On the other hand, the California doctors report less time in hospital care of patients (10 percent) than these studies (23.3 percent in rural Iowa, 19.5 percent in rural New York, and 16.5 percent in rural Washington). Additionally this table makes clear that while most of these doctors report making house calls, this occupies a generally small amount of practice time. The same is true of travel time despite the frequent absence of a local hospital and the generally greater distances between health facilities. Running the office, coping with expanding paper work, and other aspects of office administration, which have been the object of mounting complaint, turn out also not to absorb any noticeable fraction of time.

TABLE 3-2

PERCENT OF PHYSICIANS' TIME SPENT IN VARIOUS PRACTICE ACTIVITIES ON AN AVERAGE WORKING DAY

Activity	Median Percent
Patient care in office	70
Patient care in hospital	10
Office administration	2
House calls	1
Travel time	1
Consultation with other physicians	1
Professional reading	2

While the pattern of major activities compared to the minor is unambiguous, these are averages for the entire set of small town doctors. In fact there is considerable variation around the two primary activities of office and hospital care. The variation in patient care in the office ranges from 30

percent to 95 percent, while that in patient care in the hospital is from 0 percent to 60 percent. This indicates that there are minorities of these physicians whose pattern of practice is much more centered on the hosptial than the bulk of his colleagues in these communities and another minority who utilize the hospital little or not at all. Variation in the other activities is generally minor.

Income

One of the charges freqently made in the physician manpower debate is that rural and small town areas are losing and cannot attract physicians because a physician cannot obtain an adequate income in such areas. With this problem in mind each physician was asked to indicate in which of six income categories his current annual net income from his practice would fall (Table 3–3). A little over one-half of the doctors (52.8 percent) indicated they earn from $30,000 to $59,999 per year, while 23.1 percent make less than $30,000 and 19.8 percent make $60,000 or more. The mean net annual income of these doctors lies between $30,000 and $44,999. This compares to the average net income for all U. S. general practitioners in 1973 of $42,336 (Warner and Aherne, 1974, Table 70, p. 199). The same survey reports that the average net income of general practitioners in nonmetropolitan areas in 1973 was $43,613, compared to $43,677 for general practitioners in cities of 50,000 to 999,999 in population and $39,950 for those in cities of 1 million people or larger (Table 63, p. 192). Looking at these national data in another way, 52.8 percent of all U. S. doctors in 1973 had net incomes between $31,000 and $60,000, 24.1 percent earned $30,000 or less, and 24.7 percent earned $61,000 or more (Chart 11, p. 190.) This grouping of national data on all types of

doctors as well as the average incomes of general practitioners shows a remarkable similarity to the incomes of the California small town doctors. One necessary caution is that 1973 national data are here being compared with 1974 California figures. Since this has been a period of rising incomes, the later figures should be larger for similar types of practices. The 1973 American Medical Association survey, in fact, reports incomes of all types of physicians to be increasing at a rate of 4.5 percent annually over the period 1971–73. Nevertheless, these comparisons suggest that there is probably considerable exaggeration in the idea that small town doctors cannot earn adequate incomes. The incomes of these California doctors would seem to compare quite favorably to general practitioners in the cities as well as all other doctors. With generally small staffs, these doctors are providing medical care to relatively large numbers of patients and apparently earning comparatively good incomes for their efforts. These findings, in turn, add further support to the idea that additional income incentives may not be very effective in holding and attracting more doctors to rural small town areas (Lave, et al., 1975, p. 112).

TABLE 3-3

DISTRIBUTION OF ANNUAL NET INCOME
FROM MEDICAL PRACTICE

Income Category	Number	Percent
Less than $15,000	3	3.3
$15,000 to $29,999	18	19.8
$30,000 to $44,999	29	31.9
$45,000 to $59,999	19	20.9
$60,000 to $74,999	7	7.7
$75,000 and over	11	12.1
No response	4	4.4
TOTAL	91	100.0

How do the different aspects of the doctor's medical practice situation relate to each other? Size of office staff is significantly related to size of patient load (Table 3–4). The larger the office staff of the doctor, the larger the number of patients he reports seeing daily. Size of office staff is also related to frequency of hospital use (Table 3–5) with those doctors with the larger staffs also reporting more frequent use of the hospital. Since the number of patients being seen is not itself related to frequency of hospital use, it is not simply a matter of those doctors who see more patients being more likely to encounter conditions requiring hospitalization. Rather the doctors with larger staffs, i.e., four-eight assistants, apparently practice in a way that requires more frequent use of the hospital (meaning visiting it twice each day or more frequently). How the doctor distributes his time among practice activities is also not related to staff size. Neither the doctors who spend more than the average amount of time treating patients in the office nor those spending more than the average treating patients in the hospital differ in the size of their staffs. Those spending more time on their office care do, however, tend to use the hospital less frequently (Table 3–6), but such doctors are not any more likely to have heavier patient loads. While one or another doctor did occasionally comment that he could not spare time from his office practice to care for hospitalized patients, these now appear to be exceptional cases, for the number of patients being seen is not related to proportion of time devoted to office patient care.

These various characteristics of the doctor's practice arrangements also reveal a number of relationships to net income from his practice. The most significant relationship is between net income and the number of patients seen

(Table 3–7), with more patients generating a higher income. However, having a larger staff, spending more time in office patient care, or using the hospital more frequently are not related to having a higher income. The strong relationship to number of patients confirms other studies that have shown that the more patients the physician sees the greater his earnings will be (American Family Physician/General Practitioner, 1970). And in this connection there is an important regional contrast. The mountain doctors compared to the valley doctors are more likely to see fewer patients (Table 3–8) and consequently they also report having smaller incomes (Table 3–9). The other aspects of the practice situation are not significantly related to the regional contrast, although there is a slight tendency for the mountain doctors both to have smaller office staffs, and to use the hospital less frequently.

> "(X town) has been good to me — financially and with a successful practice. I like it, but I'm working too hard. It would kill a young man, but I've been doing it so I'm used to it. I'm satisfied. I wouldn't practice in a large city. It's not for me." (25–27)

This statement sums up the views of many of these doctors on their practice situation. It also reflects some of the overall findings on their practices. In general these doctors see large numbers of patients. They work hard at their profession. Most have hospital privileges, but most of their work is done in their offices where they are assisted by a small staff of nursing and office personnel. And for their efforts they are well-rewarded. The financial gain is an important part of the rewards, as the doctor quoted above mentioned. But that is not the only important reward. The character of the

work itself and the sense of accomplishment are also important. As another physician stated:

> "Personal satisfaction — that's very good in medicine. You know the patient and the whole family. They're dependent on you. You fill a real need. The patients have no one else to turn to. Of course, the first few years I was here, it was very different from now. I used to deliver babies here in the office and crawl down embankments to get people out of auto wrecks. But that's the big satisfaction. You're really helping people." (29–80)

TABLES FOR
PRACTICE SITUATION

Table 3-4.
Number of Office Personnel by
Number of Patients Seen Daily

	PATSEEN	
Stafsize	Low	High
Low	61.5	34.9
High	38.5	65.1
	(N=52)	(N=43)

$X^2 = 5.67$; df = 1; $p < .025$

Table 3-5.
Number of Office Personnel by
Hospital Use Frequency

	HOSFREQ	
Stafsize	Low	High
Low	64.6	35.3
High	35.4	64.7
	(N=48)	(N=51)

$X^2 = 7.35$; df = 1; $p < .01$

Table 3-6.
Percent Time Spent in Office Practice
by Hospital Use Frequency

	HOSFREQ	
Officepr	Low	High
Low	34.9	60.0
High	65.1	40.0
	(N=43)	(N=50)

$X^2 = 4.88$; df = 1; $p < .05$

Table 3-7.
Number of Patients Seen Daily
by Net Income from Practice

	NETINC	
Patseen	Low	High
Low	76.5	27.5
High	23.5	72.5
	(N=51)	(N=40)

$X^2 = 19.78$; df = 1; $p < .001$

Table 3-8.
Region by Number of
Patients Seen Daily

	PATSEEN	
Region	Low	High
Valley	40.4	69.8
Mountain	59.6	30.2
	(N=52)	(N=43)

$X^2 = 7.03$; df = 1; $p < .01$

Table 3-9.
Region by Net Income
From Practice

	NETINC	
Region	Low	High
Valley	43.1	65.0
Mountain	56.9	35.0
	(N=51)	(N=40)

$X^2 = 3.47$; df = 1 $p < .10$

Medicine is the epitome of the class of occupations that are called professions. While there is little agreement on just what should be considered a profession, there is considerable consensus on the importance of commitment to a vocation, extensive training in an elaborate body of knowledge and technique, an orientation to service, occupational organization, and autonomy (Moore, 1970: 4–16). These characteristics of a profession tend in fact to be closely interrelated. Professions are based on knowledge and skills sufficiently complex that they cannot be simply and quickly learned but require extensive tutoring. The considerable effort at mastering professional knowledge requires more than casual attention. It requires some commitment and in turn instills further commitment in the course of training. The control of a unique set of skills leads to claims of autonomy, of the necessity to control the conditions of work in the profession since only the trained professional can fully understand what conditions are required. The vehicle of such claims is the professional organization, bringing together those successfully trained in the profession in a body which represents the interests of the profession. In articulating and pressuring for the rights of autonomy claimed by the profession the professional organization also finds itself required to accept the responsibility of such autonomy, namely to set standards of professional performance and in general be concerned with professional competence.

This way of viewing the professions provides a basis for appreciating the intensity and complexity of the world of work of the professional. It is

fully applicable to the solo medical practitioner. Introduction to this world generally begins with medical school and in Section 2 a brief discussion was presented of the medical school background of the small town doctors. In this section several additional aspects of the doctor's professional world will be reviewed. This topic has been singled out here because the issue of professional isolation is very prominent in discussions of the decline of small town doctors (Steinwald & Steinwald, 1975). In both general commentaries and research reports the reluctance of physicians to practice in small towns has been explained by their concern over lack of colleagues with whom they could discuss medical problems or professional issues, arrange reciprocal coverage to obtain free time or obtain a consultation. The issue, in short, is that they would soon "lose touch" professionally.

The solo practitioner, while accenting the independence of the medical professional, is nonetheless dependent on medical colleagues for referring his patients, for assuming responsibility for his patients on days off or when otherwise absent, for resolving local professional problems, or for representing physician interests in regional matters. One doctor, commenting on whether professional isolation was a problem, noted:

> "Yes, to a certain extent (it is a problem). There's no one else with my interests here. The closest is in Reno. I talk to other internists a couple of times a week on the telephone, but that gets expensive. For the most part, all you can do is read and go to school two weeks a year." (10–62)

In order to assess the professional situation of the small town physician three topics were investigated: his relations to the local medical society,

his relations to local physicians, and activities related to keeping informed on advances in medical care.

Local Medical Society

The medical profession in the United States is especially distinguished by the influence of the national association of physicians, the American Medical Association, which has had a significant influence on medical education, medical facilities, physician careers, and medical practice (Hyde, 1954; Ehrenreich, 1970; Stevens, 1971). Its direct involvement in setting standards for physician licensing and hospital accreditation, in defining what is legitimate medical practice, and in disseminating medical information strongly affects medical practice. In addition, the particular way the American Medical Association has been organized, by grouping local bodies into state units and these into a single national body and making local membership the basic membership subjects the individual practitioners to another, more immediate set of influences from the local medical society. These local bodies are commonly concerned with continuing education of their members, problems of ethics, as well as general professional issues. Their members often constitute a collegial group of the experienced local practitioners with whom referral relations can be established, who control membership on the medical staffs of local hospitals, and with whom technical information can be exchanged. In short membership in the local society connects the practicing physician to the larger medical fraternity of which he is a part and can affect him in varying ways.

While membership in the professional society is not the necessity that it once was, still 86.8 percent of the small town doctors studied are members of their county medical society as well as members of the American Medical Association. Membership, of course, establishes only the formal condition of involvement with the organized set of local doctors, rather than the degree of involvement itself. A considerably lower proportion, 60 percent, view themselves as active in the local medical society. Finally, attending meetings and holding office were used as indicators of actual in contrast to perceived involvement. Only 45.7 percent indicated that they always or usually attend local society meetings, while 54.2 percent said they attend such meetings occasionally or less frequently. Finally, 22.3 percent currently hold office or serve on a committee of the local medical society. While it is not unexpected that actual participation is less than the fact of membership, and holding office much less than participation, the fact that almost half the members are regular participants and almost one-quarter currently hold some type of official position in the society suggests a relatively high level of member involvement in the county medical societies.

The doctor who says he is active in his local medical society is also likely to indicate that he generally attends local meetings. Otherwise, being active in the local medical society shows little relation to any of the other aspects of the local doctor's life that have been pursued in this study. There is no relationship to any of the career variables, like the length of time in practice in town, age, or to any aspects of the practice situation, the professional situation, or the community situation. Participating in the local medical society is unrelated to community participation and, more

surprisingly, to contact with other physicians. Involvement by these doctors in the local medical society, thus, seems insulated both from any general pattern of social participation as well as what might appear more interdependent areas of activity, like his medical practice or other professional activities. This lack of relation may reflect the declining role of the local medical society in the everyday world of the practicing physician.

Physician Contact

While the local medical society provides an organized context for establishing and maintaining colleague relations, and one that was decisive for successful medical practice in earlier years, there are other ways for a local doctor to develop colleague relations. Most of these relate to his work activities. As discussed in Section 3, most of the small town doctors utilize a hospital for the care of their patients, while almost three-fourths of them (71.6 percent) use 2 or more hospitals. Hospital membership, like county medical society membership, creates a setting for physicians to meet to discuss common problems as well as to establish colleague relations. Thus, the most frequently cited reason for going to a second or additional hospital was to assist another doctor in the treatment of a patient (see Table 4–1). That such hospital activity is a major source of colleague relations is also born out in the doctors' discussions of physician contacts. Hospital contacts are seen by most of the doctors as their major source of physician contacts (see Table 4–2).

TABLE 4-1

PERCENT DISTRIBUTION OF REASONS
PHYSICIANS USE ANOTHER HOSPITAL

	Number	Percent
To Assist Other Physicians	46	48.4
To See Patients	35	36.8
To Hospitalize Patients	17	17.9
To Consult	6	6.3
To Teach	5	5.3

TABLE 4-2

PERCENT DISTRIBUTION OF TYPES
OF CONTRACT REPORTED BETWEEN PHYSICIANS

	Number	Percent
Hospital Membership	86	81.1
Referral Relations	54	50.9
Informal Relations	54	50.9
Professional Meetings	44	41.5

Another important type of physician contact is referral relations. These are frequently regarded as a problem in the rural and small town setting because of the absence of specialists to whom referrals can be made plus a suspicion that general practitioners do not make referrals as often as they should. Neither of these problems can be demonstrated here. While it is true that there are few specialists in the towns studied, there are specialists in abundance in these regions. How accessible they are is another matter. The doctors themselves indicate that referral contacts are an important source of physician contacts (see Table 4–2). One doctor, discussing the referral situation, noted:

> "You can practice ideal medicine here. We have all the facilities within eight to ten miles, and all the specialists we need. That's one advantage of practicing in this sort of community. Referrals are readily available." (20–92)

This does not establish that all physicians use referrals or use them when they should, and some physicians noted that they had problems with referrals. As one doctor described the situation:

> "The biggest problem for me is probably consultation, and getting patients in to see specialists. Especially internal medicine and psychiatry. It's a hassle to get them in to see them. It's also hard to know what they've given them. The care is broken up. For internal medicine, it's hard to get someone in to see them or get them to come and see them here. They (patients) have to go to X. We need a specialist in internal medicine here." (36–103)

Most doctors, however, did not see consultations as a problem and described well-established and smoothly working arrangements for referring patients to specialists, generally in the nearest city. These reported referral relations in some cases overlap or connect with the hospital relations of a physician, for they are some of the same people. Specialists on the same hospital staff will be the specialists that the general practitioner will employ for consultation. To what extent the different types of physician contact involve the same physicians cannot, unfortunately, be determined from the information on hand.

In most of the communities in the study, there is more than one physician in practice. Most have two to four doctors (see Appendix 1). This also creates a situation for establishing colleague relations. As Table 4–2 shows,

informal contact is one of the major forms of doctor relations. One doctor, asked about seeing any of the other doctors in town, commented he had "Regular contact — it's a small town. I bump into them all the time". Such informal relations are the least job-specific of any of the contacts that the doctors have with each other. While it seems many such contacts are in fact job-related, for example, taking calls for each other, they also shade off into casual or social relations.

In order to obtain a summary view of physican relations, a contact score was constructed simply by counting each of the four types of contact (medical society, hospital, referral, and informal) as one or zero, giving a range of contact from zero to four. The career variables, such as number of years in practice in town or having tried a different form of practice arrangement, were generally unrelated to the physician contact score. The one exception was number of towns practiced in, which showed a tendency for doctors with high contact scores to have practiced in only one or two towns, while those with low scores to have practiced more often in three (Table 4—3). This relation might seem to be simply a function of length of time in practice in town with doctors who change towns having less time to establish a network of contacts. However, there was no relation between contact score and number of years in practice in town. Another possibility is that those more often moving their practice locations do not seek to establish many colleague relations. There is some evidence that this might be the case from the discussion in Sections 2 and 3 where the movers, so to speak, are identified as more likely to have smaller practices and to be located in the mountains. Later in Section 5 this idea will be pursued further in terms of their community involvement.

In contrast to the lack of relation to career differences, the physician contact score was generally related to the doctor's practice situation. Staff size, which is strongly related to number of patients seen, is positively related to physician contact score: the larger the staff of the doctor, the higher his physician contact score (Table 4–4). Similarly, there is a tendency, which does not quite reach statistical significance, for frequency of hospital use to be related to contact score (Table 4–5). Using these two variables to stand for the various types of information on the doctor's practice, it appears that doctors with the more active practices are more likely to have more different kinds of contact with other doctors. This is not unexpected since the doctor with many patients is likely to have more need of specialist consultation as well as hospital beds. On the other hand, an idea of wide currency is that small town doctors are too busy with their patients in their offices to have any time for colleague relations and, thus, become isolated by their busy practices. The information from these small town doctors suggests that this idea has little merit. Finally, contact score was quite unrelated to involvement with the local medical society, as indexed by frequency of going to meetings. The physician involved in more kinds of colleague relations is not the physician active in the local medical society. Since only two of the four items in the physician contact score are closely work related, this is not explained by the work-related nature of the physician contact score versus the profession-related nature of local medical society attendance.

Keeping Up

The professional situation of the small town practitioner has been the focus of much concern because of the reputed problem of isolation that is repeatedly raised. Consequently the character of colleague relations has been pursued in this study to establish what these are for California's small town doctors. A second problem that is presumed to follow from the first has received as much or more attention. This is the problem of keeping up in medicine, of staying abreast of the constantly changing fund of medical information and techniques, which is believed to be especially serious for the solo general practitioner (Peterson, et al., 1956).

Virtually all of the doctors interviewed (98.9 percent) identified some activity that they usually pursued in order to maintain their expertise. This ranges from the 71.4 percent who say they attend post-graduate courses to the 19.4 percent who attend local seminars to the substantial numbers who keep up by talking with local doctors, through consultations, reading professional journals, and/or attending professional meetings (see Table 4–6). How these doctors view this potential problem will be discussed in a later section, for at this point these activities are viewed as another means by which the local doctor is connected to his professional community. And some are much more connected in this way than others. As one doctor put it:

> "We're so far away up here it is difficult to attend meetings, get to seminars, things like that. What's particularly difficult is getting someone to take your place. It's hard to get someone here so you can leave." (10–68)

But then, according to another physician:

"For me, I take a week off. Then you get the most in the shortest time. I use the AMA videotapes. I like them. The doctors share them on surgery. I read some journals, but there are too many of them. I like courses. (I also use) Audio tapes — depending on the activities — two hours per week, while driving or at home. I used to do more, 14 hours a week using every minute — lunch time, etc. (13–05)

TABLE 4-6

PERCENT DISTRIBUTION OF PHYSICIANS' ACTIVITIES TO MAINTAIN EXPERTISE

	Number	Percent
Attend Postgraduate Courses	70	71.4
Talk with Local Doctors	56	57.1
Consultations	49	50.0
Read Journals	44	44.9
Attend Professional Meetings	43	43.9
Attend Local Seminars	19	19.4

TABLE 4-7

PERCENT DISTRIBUTION OF NUMBER OF JOURNALS READ REGULARLY

No. of Journals Read Regularly	Number	Percent
0	4	4.2
1	16	16.8
2	42	44.2
3	13	13.7
4	7	7.4
5	2	2.1
6	2	2.1
7	2	2.1
9	7	7.4
TOTALS	95	100.0

These two comments suggest some of the range of involvement in continuing education, from the formal courses to the very informal discussions with other doctors.

The reading of medical journals was specifically probed because even the most isolated physician has access to the postal service. As shown in Table 4–7 almost half the doctors interviewed read two medical journals regularly. There was little agreement on which ones are most useful to this group of doctors. Only 2, the Journal of the American Medical Association and the American Family Physician, are read by more than 20 percent of the doctors. An amazing total of 56 journals are claimed to be read regularly but clearly by very small numbers of physicians. These range from such generally prestigious journals as the New England Journal of Medicine to such specialized publications as Aerospace Medicine to throw away journals like Medical Times.

Once again, the career variables are generally not related to doctors' activities at keeping up in medicine, which was indexed in the manner of the physician contact score by assigning a value of one to each type of activity. The one exception was again the number of towns practiced in, which shows that doctors with high scores on keeping up in medicine have practiced in one town, while those with low scores have practiced in three (see Table 4–8). And it is not age or duration that is the real influence here because there is no relation between age or number of years practicing in town and the keeping up in medicine score. This adds additional weight to the question of whether the more mobile small town doctors have a different professional orientation. The

question takes on further importance because almost one-third of the small town doctors are the more mobile type, i.e., have practiced in three or more towns.

The practice situation variables also are unrelated to the keeping up in medicine activities. Doctors with the more active practices, in terms of number of patients seen and size of staff, are not involved in more activities that keep them in touch with medical developments than doctors with less busy practices. However, those doctors who utilize the hospital more in their practice do tend to be involved in more of these activities (Table 4–9). Regarding colleague relations, there is no relation between local medical society involvement and keeping up activities, but there is an unusually strong relation between the physician contact score and keeping up (Table 4–10). Those doctors who are involved with other doctors in many different ways are the doctors who engage in a variety of activities to maintain their professional abilities. These contrasting findings further support the idea that the local medical society is not very germane to the world of medical practice, even though it is one context for establishing physician relations. Other types of physician relations that develop around the hospital, around consultations, and even in informal unorganized settings appear much more pertinent.

The professional situation of the small town physician has been examined here because the issue of professional isolation is frequently raised as a key problem for these physicians. It is alleged to contribute both to the reluctance of doctors to practice in small towns and to their difficulties in

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trying to be effective physicians. Only three aspects of the doctor's professional situation were studied, but they provide three different vantage points in assessing this matter. From none of them is there much support for the notion that even these doctors who are working in the smallest of medical communities are isolated in any absolute sense. Most of them are members of their local medical society, are involved in other professional relations with colleagues, and participate in activities to maintain their professional expertise. Further, substantial numbers of them are medical society activists, participate in an extensive network of colleague relations, and seriously attend to the problem of updating their medical knowledge. Two findings stand out. One is that involvement in the medical society is generally not related to any of the other aspects of the professional situation, which may reflect its declining importance professionally. The second is that the more active practitioners, in terms of larger size of office staff and larger number of patients regularly seen, are more likely to report greater contact with other physicians and more extensive activity in keeping up in medicine. Although busyness is also alleged to be a problem of small town doctors, among these physicians there is a very considerable range of busyness, in terms of numbers of patients being seen, ranging from the extremely busy to the not very busy at all. These data indicate that there are some important correlates of the busy compared to the less busy doctor, correlates like physician contact and keeping up in medicine activities, that probably affect his practice and his work. As one physician put it:

> "The biggest problem is professional isolation. Out here you've got to work harder, to be on your own. There's truth to the problem of isolation. You get a problem your not sure. You get upset and worry about the cases you can't handle." (10–36)

Table 4-3.
Physician Contact Score by
Number of Towns Practiced In

	TOWNSPR		
Contscor	1.	2.	3.
Low	52.5	51.4	77.4
High	47.5	48.6	22.6
	(N=40)	(N=35)	(N=31)

$X^2 = 5.89$; df = 2; $p < .10$

Table 4-4.
Contact Score by Number
of Office Personnel

	STAFSIZE	
Contscor	Low	High
Low	73.5	51.0
High	26.5	49.0
	(N=49)	(N=51)

$X^2 = 4.45$; df = 1; $p < .05$

Table 4-5.
Contact Score by Hospital
Use Frequency

	HOSFREQ	
Contscor	All Other	More than 2X Per Week
Low	69.4	52.8
High	30.6	47.2
	(N=49)	(N=53)

$X^2 = 2.27$; df = 1; NS* (p=.13)

* Not Significant

Table 4-8.
Number of Towns Practiced in
by Keep Up Score

	KEEPUPSC	
Townspr	Low	High
One	28.0	46.4
Two	30.0	35.7
Three or More	42.0	17.9
	(N=50)	(N=56)

$X^2 = 7.90$; df = 2; $p < .025$

Table 4-9.
Hospital use Frequency by
Keep Up Score

	KEEPUPSC	
Hosfreq	Low	High
Low	58.0	38.5
High	42.0	61.5
	(N=50)	(N=52)

$X^2 = 3.15$; df = 1; $p < .10$

Table 4-10
Keep Up Score by
Contact Score

	CONTSCOR	
Keepupsc	Low	High
Low	61.9	25.6
High	38.1	74.4
	(N=63)	(N=43)

$X^2 = 12.11$; df = 1; $p < .001$

> "It's great! I like so many things about it (X town). First, it's very friendly. Everyone's willing to help. For example, our house is never locked. We never take the keys out of our car. We have three kids...they can do things — go bowling, go to the park. If anything happens, you know about it before they get home. They like it. Also, I have become very involved — I'm on the school board, and I probably will serve in other political realms. My wife thinks its terrific." (12–85)

This doctor's comment on the community where he lives and practices medicine identifies a few, but only a few, of the reasons given by these doctors for liking their towns. While much attention has been given the community setting in attempting to explain the geographic distribution of physicians and especially the problem of maldistribution (Rushing, 1975), the focus has been on characteristics of the community population or economy or community health facilities. This has meant examining such features as per capita income and hospital bed size. These community characteristics have been shown to have some importance to physician location, as discussed in Appendix 1, but they identify only a small part of the local community and not necessarily the most important parts with respect to general practice of medicine. Thus, there are very considerable differences in local population characteristics as well as local health facilities in this sample of small town doctors, and these differences did not turn out generally to be strongly related to any of the career, situational, or problem orientation differences that were found. Although this outcome was not known at the time the study was planned, it was nonetheless decided at the beginning to focus more broadly on the doctor's community situation as a potentially important aspect of his occupational life.

In small towns, the isolation of job from community is less likely to be as complete as in cities, for the wide acquaintanceship of people and events in small towns often does not permit it. The doctor in the small town occupies a position of prominence due to his occupation, which is likely to result in his being drawn into community affairs, as illustrated in the preceding quotation. The doctor, in turn, may find it difficult to isolate himself completely from these social forces. In addition, the small town presents a very definite contrast to the city and suburbs, especially with regard to many widely publicized urban problems. Consequently, an attempt was made in this study to explore the views of these doctors on their communities and their involvement in community social life.

Entering the Community

To obtain some perspective on the physicians' community situation both the time of their arrival and their ways of learning of the town were determined. The doctors' stories varied markedly in describing the intensity and complexity of the effort to select a community in which to practice. For some it grew naturally and easily out of their medical training program, others were referred to a town or local doctor needing more help, while others developed a set of priorities and then went hunting. When the various stories were analyzed and coded, the largest group of doctors learned of their community through prior contact with the town (40.6 percent). They had grown up there, had vacationed there, or had friends or relatives living there. Another large group (22.7 percent) found the town either through their medical training institution or medical colleagues. Only 10.4 percent named medical journal

advertisements or the California Medical Association placement service as the way they located their community. However, these latter two groups can both be viewed as having relied on professional sources of information and contact in contrast to the first group. Finally, there is a third group without either the local or professional connections of the first two, which mounted an active search, generally based on their concept of a desirable community in which to work. As described by one doctor:

> "When I got out of school, we'd planned it (the kind of community desired). We wanted a place about 3,500 feet elevation. Population between 5,000 and 20,000. Warm in the summer, cold in the winter. We came up with a list of 10-15 places. (X town) was our first choice but someone else got there first. (Y town where he practices) was our second choice." (17–62)

While it was only the doctors undertaking active searches, like the one above, who elaborated what they were looking for in a community, many of those who learned of their community through either the family-and-friends network or professional connections made clear that they also had a certain type of community in mind. Thus, along with noting that they learned of the town through a medical preceptor or a colleague friend, they would note that, "I was basically looking for a small town with a hospital"; "I primarily didn't want a crowded area"; "I wanted to go into GP practice in a small town".

In emphasizing the selectivity exercised by these doctors, it is important to remember that by eliminating the oldest doctors from the sample, those interviewed are post-depression physicians. They began practicing during and after the Second World War when shortages of physicians were serious in many

parts of the country and employment and incomes in the nation high and rising. The earliest year of California licensing for physicians in the study is 1942, while no physician in the study began practicing in any of the 69 communities before 1945. Doctors starting practices at this time faced a generally favorable situation of high demand, giving them opportunities for choice as compared with the depressed situation of the thirties. These choices of community, in turn, have tended to be enduring ones. As discussed in Section 2, most of these doctors have practiced in only one or two towns in their career. The average length of time they have been practicing in their current community, keeping in mind the age range involved and that some of these doctors were licensed as recently as 1969, is 15.9 years. Thus, the group as a whole has had a long period of contact with the community they selected and should know it well, the strengths as well as the weaknesses. One final point in this connection is that not all these doctors reside in the community where they practice. To be sure almost three-quarters of them do (74.5 percent). However, a minority (17 percent) live in the more open area surrounding the town or on a nearby farm or ranch. As one doctor put it:

> "I live out of town. That's one reason I like living here — I can live out in the country. I live in a rather remote area. I don't like a lot of people around me, watching and talking about what I'm doing. It's not that I'm paranoid, but people are like that." (9–57)

The type of environment that these doctors find attractive in small town California will be discussed in greater detail later in this section, but open space and its corollary, lack of people, are concerns that were frequently voiced, as in the above comment. A smaller proportion (8.5 percent) lives in

another town altogether. This arrangement generally reflects the difficulty some doctors in small towns have in restricting access to their services by their patients.

Community Social Life

It was expected that most small town doctors would be very active and involved in their medical practice. It was also expected that many, though not all, would be active and involved, though probably to a lesser degree, in their professional community. It was much less clear what should be expected of their activity and involvement in their residential community. Doctors have frequently been portrayed as totally involved in their occupational and professional activities to the total exclusion of any other concerns, including their families. At the same time there are many examples of doctors who are active in community affairs, the arts, sports, and education. Since it seemed likely that the character of the small town and what it represented to these doctors figured more importantly in both their locating in such a setting and their continued practice there than doctors locating in urban areas, their community involvement was an unknown that might add to our understanding of this type of medical practice. Several different approaches were used to explore the topic: by defining the nature and extent of the doctor's participation in community activities, by locating his close friends, by defining his recreational interests, and by describing his business activities not related directly to his medical practice.

How do these doctors view the social life of their communities, especially the groups and their activities that form around particular interests that people have? Most consider that these small towns are centers of considerable group activity. According to one:

> "There are a lot of different clubs — women's clubs, service organizations, Lions Club is active, Masonic group, Rotary. The women have a lot of organizations, plus a lot of church groups are active. We have a community calendar, a "Birthday Calendar". We have an active Chamber of Commerce, which does the calendar, puts on a big Christmas parade." (26–84)

Some doctors emphasize the church groups and their activities (55.7 percent), others the service clubs like the Lions, Oddfellows, Rotary (47.2 percent), still others recreational groups such as theatre and music societies or sports clubs (38.7 percent), or civic organizations (33 percent), social clubs (33 percent), school and educational groups (20 percent). And the more informal partying activity was stressed by 24.5 percent. Emphasis on the variety of interest activities was encountered frequently in the interviews:

> "For the size of the town there's more than you'd find in cities. Dances — we have them pretty frequently. Clubs, like there's a group for people who enjoy riding, but it is social. There's a golf club. Someone is always giving a small party of some kind or another. There was a Rotary Club, but it disbanded. There was a Lions Club for a while. It lasted about two years. I joined them. I thought they were going to do useful work. But I could never really participate. Either I never got there or I'm called out after five minutes. We have a Chamber of Commerce though. I belong to that." (31–77)

This comment not only stresses the variety of community groups and their activities that residents can be involved in but also the difficulty that the

physician in a small town frequently encounters in using his free time. In a small town setting he is more apt to be directly accessible to the local people. They know who he is and where he is to be found. Thus, the free time that he can obtain from a busy practice becomes very conditional and outside activities that require a fixed or continous commitment of time may become difficult or impossible.

Participation in community activities ranges from the doctor who said, "I start (work) at 6 a.m., am often here (office) until 8 at night, (and) get home about 10:00 p.m. I have no social life." to one who responded that, "I'm aware of everything that goes on here. I'm Mayor, too — so I have to be!" Almost two-thirds of the doctors (65.4 percent) indicated that they participate in some part of their town's social life. The major areas of involvement are community institutions (i.e., school and church groups) with 32.1 percent, social-recreational groups with 27.4 percent, and service clubs with 24.5 percent. Only a minority (14.2 percent) participated in civic groups. Significantly, 26.4 percent of the doctors said they were active in the social life of some other community, a figure far higher than the number who reside in a separate community (8.5 percent). Although confirming information is lacking, it seems likely in view of the comments of a number of physicians that this is one means of dealing with the problem of preventing their professional lives from completely dominating and limiting any type of personal life.

The most important conclusion regarding relationships to community participation is negative. Neither variations in career, nor in practice

situation, nor in professional situation are related to variations in community participation. Whether a doctor is a relatively long-term resident, has practiced in several towns or not, or has tried another practice arrangement, for example, is unrelated to community participation. Similarly, having a busy practice with many patients or being highly involved with the local medical society or having extensive relations with other physicians, all indicative of high social participation relevant to professional interests, is not related to high community participation. Most physicians, even in small towns with their less anonymous populations, thus appear to segregate their practice and professional lives from their personal and public community lives. More importantly, perhaps, the forces that shape the medical practice and professional spheres are apparently independent of those shaping the physician's community sphere. For example, the idea that personal contacts made through participation in community groups might aid a practice (with the high community participator enjoying higher patient loads) is not supported in this group of physicians. And while the practice situation generally was found to relate to the professional situation, there is no similar connection with the community situation.

Friends

Another indication of local community involvement is whether most of the physician's close friends are also local residents. A small number (4.8 percent) responded that they had no close friends, either in town or anywhere else. For the rest, the largest number (44.4 percent) said that most of their close friends indeed were local people. Another 28.3 percent indicated that

their close friends mostly lived elsewhere and not locally, while a third group (25.5 percent) explained that their close friends were divided between local residents and persons living some distance, like close friends from medical school who are practicing in other parts of the State.

As was the case with community participation, variations in career and practice situation did not relate to having close friends in the community. The lack of relation with the doctor's professional situation is not so emphatic, for both the physician contact score and, more particularly, the element out of that score of having informal relations with other physicians, approaches significance (Tables 5–1 and 5–2). The one very striking relationship, however, is with community participation. The doctors who say most of their close friends are in the local community tend to be those who are widely involved in community activities (Table 5–3). Whether developing close friends locally leads to community participation, or the equally plausible reverse, cannot be determined from our data.

Some of the findings related to wives and community participation make it appropriate to consider them at this point. One of the impressions obtained early in the interviewing was that while several of these doctors said they participated in community activities and even felt obligated to involve themselves in community affairs, it was frequently their wives who did most of the actual participating, serving as a surrogate for the doctor. As noted earlier, when the total set of interviews was analyzed, 65.4 percent of the doctors said they participated in their community's social life. Looking at their wives, almost as many (59.7 percent) are also community participants —

at least in the eyes of their husbands. Now it turns out, in contrast to those early impressions, that husbands' and wives' community participation is highly related. If the husband is active in community affairs, so is the wife, rather than the reciprocal relation that was suggested initially. Further, bringing us back to the present topic of friends, if the husband says their close friends are in the local community, it is highly likely that the wife is an active community participant (Table 5-4). Thus, there seems to be a pattern characterizing almost one-half of the doctors of developing close friendships in the community, which is accompanied by taking part in community affairs, on the part of both the doctors and their wives.

Recreation

One potential attraction of the urban ambiance, and a corresponding limitation of small towns, is the recreational arts. Cities have professional theatre, museums, opera, and orchestral programs. They also have night clubs, foreign cinema, and national lecture programs. These are not the only outlets for recreational urges, however, and small town life offers its own set of distinctive recreational possibilities, like river rafting, hunting, fishing, and mountain hiking. In order to determine how these small town physicians regarded the recreation issue they were queried about their interests and activities in this area. Virtually all have them (98.1 percent). What was more striking was that 84 percent named outdoor activities (hunting, fishing, hiking, gardening, horseback riding, etc.) as what they did for fun, compared to the 42.5 percent who listed active sports activities (tennis, skiing, golf, etc.) and the 38.7 percent who cited hobbies (of many kinds). Many, of

course, participated in all three types. Trailing far behind is a small group (6.6 percent) whose recreation is travel and another (6.6 percent) who own ranches or farms but consider these a form of recreation.

Examining selected indicators, no systematic relationships are discernible between active participation in recreation and doctor's career, practice situation, professional situation, or even the other aspects of the community situation. A single exception is contact with other doctors (see Table 5–5), but this does not alter the overall conclusion that whatever the touted advantages of recreational opportunities in these rural small towns, seen in the comments of the doctors themselves, they are not linked in any important way to the different components of the doctor's world being investigated here.

Business Activities

The high average income of physicians makes them prime candidates for business investments and the rural areas surrounding small town California offer them some distinctive opportunities, such as grape vineyards, cattle ranches, walnut orchards, or horse-breeding ranches, that might be interesting to these physicians and help to hold them in the area. Therefore, they were asked if they were personally involved in other business activities, not just whether they might own some stocks or bonds. More than two-fifths of the doctors (43.4 percent) said that they were. The largest proportion of those with other business activities (54.3 percent) own or participate in some type of town business (a restaurant, a retail store, rental property), 39.1 percent are farming or ranching, while 26.1 percent have some medical-related business

(a nursing home, a proprietary hospital). The proportions in these three types total more than 100 percent since some doctors are involved in more than 1. In fact by far the largest number, some 70.8 percent, are participating in 2 outside business activities. Another 7.7 percent did not specify the type of other business activity.

In contrast to the other aspects of the community that have been discussed, involvement in other business activities is linked to several of the other career and situational sectors that have been examined. First, it is very strongly related to the length of time the physician has been practicing in town (Table 5–6). There is no relation to age per se, which suggests it is duration of contact with the community that is significant in this connection. Second, there are positive relations with the set of medical practice situation variables. The average number of patients seen per day is positively related (Table 5–7), while income from practice and frequency of hospital use show similar but weaker relations (Tables 5–8 and 5–9). Finally, while there is no relation to the overall community participation score, there is a tendency for involvement in business activities to be related to participation in community institutions (Table 5–10). From these relations a pattern emerges of doctors with large, active practices, generally long-term practitioners in their communities, who tend to be active participants in one or another community institution, like the school or church, and who also are active in a couple of outside business ventures, one of which is probably a town business enterprise while the other is either a nearby ranch or nursing home. Since business activity is extremely highly related to region (Table 5–11) this is a pattern that applies primarily to the valley doctors rather

than the mountain physicians. That this regional effect should be so strong is a consequence both of the real differences between these two zones (see Appendix 1) and what different physicians seek in the community where they intend to practice, one of the subjects of the following Section.

Outlook on the Community

Of central concern was how this set of doctors viewed the community where they practice. How much did they like it? What did they like about it? What did they dislike about it? Overall they hold an overwhelmingly favorable view. Most said they like their town a lot (69.5 percent), while 21.9 percent said they like it. Only a minority were indifferent (7.6 percent) and only 1 of the 106 doctors expressed a negative view. Those who are married report that a similarly high proportion of their wives like the community (90.7 percent). Further, they hold a predominantly positive view of the townspeople: 78.3 percent have a favorable attitude, 14.2 percent a neutral one, and 7.5 percent hold both positive and negative attitudes. No physician described the local people in a generally negative way.

When asked what was it about the community that they liked or did not like, a wide array of conditions was enumerated, ranging from the friendly people and lack of smog to growing too fast and difficult mountain roads. Most of these conditions fell into one of three categories: small townness, rural ecology, and recreation opportunities. The largest number of physicians (78.3 percent) liked their community because of features associated with being a small town, like small size, lack of congestion, free of smog and traffic jams, safe for

small children. Many of these features carry an implicit comparison with cities. As one doctor commented:

> "I like it very much. It's a nice town for my needs. It's very rural. My wife and kids feel the same way. My wife's happy shopping at the local stores. The kids are on the swim team. We're content with small town living. I was born in (X city in California), but my wife's from a small town. We enjoy it. It's clean. It has nice homes. The people are friendly. We like the isolation." (10–87)

Another set of conditions that was found attractive embraces various features of the physical ecology of the small towns, especially those located in the mountains. These are such aspects as open spaces, mountains and trees, changing seasons and climate:

> "I like it real well. I like living in the country. I like where I live — we have sixty acres in the mountains. We have a river and a well on our property. The air's clear. It's nice for children. The climate's nice. There are seasonal changes. It's generally enjoyable." (13–99)

The final major category emphasizes the recreational possibilities of the small town region:

> "It's wonderful. It's fantastic. There's water skiing and snow skiing. Tennis courts right here. Last week I played tennis in the 95^{o} heat and then I took my kids up on a mountain to play in the snow." (15–62)

The drawbacks of the small towns and rural regions? "There's a lot of gossip." "This area is a bit provincial." "It's growing too fast." "I'm not living in a social/cultural center, and it's not easy to get there." In

addition some physicians made it clear that the living conditions of the small town were very distinctly secondary concerns compared to the practice conditions: "I wanted a small town, not for living but because it offers a lot for general practice." Nevertheless, most of these doctors appear on balance to be strongly attracted to their towns both as places to live as well as places to practice medicine.

Liking the community is generally unrelated to medical career, the medical practice situation, the professional situation, or the community situation. However, an interesting pattern is present within this set of doctors. Region is unusually highly related to liking the community in general (Table 5–12) and especially to liking features of the physical ecology (Table 5–13). The different categories of attraction to the community were used to construct an attraction score and this too is strongly related to region (Table 5–14). What is producing these relations is, first, that the mountain doctors generally have a more favorable view of their communities compared to the valley doctors and; second, it is the mountain doctors who find the physical ecology of their areas to be so attractive. Thus, almost 75 percent of the mountain doctors have a high attraction score, while less than 50 percent of the valley doctors do. As already discussed, the mountain practices tend to have smaller staffs, smaller patient loads, and involve less hospital use. Doctors with such practices are likely to be the ones who emphasize the attractiveness of the physical ecology, which suggests that for this subset of physicians the physical location of the community may be exerting an influence comparable to the more frequently cited medical practice conditions.

That the physician's outlook on his community is not generally related to his practice or professional situation is not surprising since these are not highly interdependent. The lack of relation to his community situation is a little more surprising until one examines what comprises this outlook. Recreation and rural ecology largely refer to the surrounding area rather than the town proper. Even small townness includes physical aspects of the town, while the community situation focused on community groups, organizations, and townspeople's activities. And these features of the community did not often arise in the doctors' discussions of what they liked about their towns. On the other hand, there are some borderline relations between community attraction and being active in other business ventures (Table 5–15) and the contact with other physicians score (Table 5–16) that suggest a small basis for community attraction in the community social relations of the physician. But the basis is very small. Except for the general pull of the small town, which seems more strongly rooted in providing the necessary conditions for general or family practice than in providing a set of living conditions for these physicians, it is the mountain physical ecology that appears to be the only really strong factor exerting an influence in attracting physicians above and beyond the medical practice considerations that they seek or require.

> "I wanted the peaceful scenery. There's something about the mountains. Just walk outside and you'll feel peaceful." (13–59)

And in contrast:

> "I wanted a small town. Not for living but because it offers a lot for general practice. It's a good opportunity to practice like this, to do everything. I knew I would lose touch with many of the things in the city, but somebody has to do it." (16–17)

Table 5-1.
Physician Contact Score by
Close Friends Living
in Community

	CLOSEFR	
Contscor	Yes	No
Low	53.5	71.4
High	46.5	28.6
	(N=71)	(N=28)

X^2 = 1.97; df =1; NS* (p=.16)

Table 5-2
Close Friend Living in Community
by Contact with Other Physicians
Informal

	CTACTINF	
Closefr	Yes	No
Yes	79.2	62.2
No	20.8	37.8
	(N=53)	(N=45)

X^2 = 2.67; df = 1; NS* (p=.10)

Table 5-3
Community Participation Score
by Close Friends Living in
Community

	CLOSEFR	
Partscor	Yes	No
Low	29.6	64.3
High	70.4	35.7
	(N=71)	(N=28)

X^2 = 8.73; df = 1; p < .005

* Not Significant

Table 5-4.
Close Friends Living in Community
by Wife Participates in Community
Social Life

	WIFEPT	
Closefr	Yes	No
Yes	90.7	51.6
No	9.3	48.4
	(N=43)	(N=31)

X^2 = 12.44; df = 1; p < .001

Table 5-5
Community Recreation Score
by Physician Contact
Score

	CONTSCOR	
Recscor	Low	High
Low	50.8	27.9
High	49.2	72.1
	(N=63)	(N=43)

X^2 = 4.61; df = 1; p < .05

Table 5-6
Number of Years Practiced in Town
by Business Activities Other than
Medical Practice

	OUTBUS	
Yrsprtw	Yes	No
Low	22.2	55.0
High	77.8	45.0
	(N=45)	(N=60)

X^2 = 10.11; df = 1; p < .005

Table 5-7.
Number of Patients Seen Daily by Business Activities other than Medical Practice

	OUTBUS	
Patseen	Yes	No
Low	41.5	64.8
High	58.5	35.2
	(N=41)	(N=54)

$X^2 = 4.23$; df = 1; $p < .05$

Table 5-8.
Net Income From Practice by Business Activities other than Medical Practice

	OUTBUS	
Netic	Yes	No
Low	43.6	65.4
High	56.4	34.6
	(N=39)	(N=52)

$X^2 = 3.46$; df = 1; $p < .10$

Table 5-9.
Hospital Use Frequency by Business Activities other than Medical Practice

	OUTBUS	
Hosfreq	Yes	No
All Other	38.6	55.2
More Than 2X Per Week	61.4	44.8
	(N=44)	(N=58)

$X^2 = 2.12$; df = 1; NS* (p=.15)

* Not Significant

Table 5-10.
Participation in Community Institutions by Business Activities other than Medical Practice

	OUTBUS	
Ptinst	Yes	No
Yes	45.2	26.8
No	54.8	73.2
	(N=42)	(N=56)

$X^2 = 2.84$; df = 1; $p < .10$

Table 5-11.
Region by Business Activities other than Medical Practice

	OUTBUS	
Region	Yes	No
Valley	78.3	40.0
Mountain	21.7	60.0
	(N=46)	(N=60)

$X^2 = 14.00$; df = 1; $p < .001$

Table 5-12.
Region by Liking the Community

	LIKECOMM	
Region	Much	All Other
Valley	43.8	84.4
Mountain	56.2	15.6
	(N=73)	(N=32)

$X^2 = 13.25$; df = 1; $p < .001$

Table 5-13.
Region by Liking Physical Ecology of Community

	LIKEECOL	
Region	Yes	No
Valley	20.9	80.3
Mountain	79.1	19.7
	(N=43)	(N=61)

$X^2 = 33.71$; df = 1; $p < .001$

Table 5-14.
Region by Community Attraction Score

	ATTSCOR	
Region	Low	High
Valley	72.9	43.1
Mountain	27.1	56.9
	(N=48)	(N=58)

$X^2 = 8.33$; df = 1; $p < .005$

Table 5-15.
Community Attraction Score by Business Activities other than Medical Practice

	OUTBUS	
Attscor	Yes	No
Low	56.5	36.7
High	43.5	63.3
	(N=46)	(N=60)

$X^2 = 3.38$; df = 1; $p < .10$

Table 5-16.
Community Attraction Score by Physician Contact Score

	CONTSCOR	
Attscor	Low	High
Low	52.4	34.9
High	47.6	65.1
	(N=63)	(N=43)

$X^2 = 2.49$; df = 1; NS* (p=.12)

* Not Significant

6. Physicians' Views on Small Town Practice

The well-known litany of problems that confronts small town physicians, such as lack of colleagues, unrelenting patient demands, and stultifying small towns, describes in many respects the reverse of the situation of urban practitioners. In earlier sections it has also been shown that some of these presumed problems are not accurate descriptions of the situation of these primary care practitioners. This suggests that the problems or advantages of small town medical practice may derive more from a presumed contrast with urban medical practice, as analyzed by generally urban-based physicians, than from the way small town practitioners actually experience their practice situation. Consequently, a special effort was made to elicit the views of these doctors on their medical practice situation in general as well as on several of the most frequently identified problems of this type of practice.

> "I'm very happy with it. Well, I've delivered a big percentage of the population. It's very gratifying. My patients like me. My families like me. I've known them for two or three generations. It's been economically rewarding. I have position, status. There's your answer. The community's been good to me. They've given me everything — socially and financially." (25–102)

As reflected in this quotation from one of the interviews, most of the doctors were pleased with their medical practice situation. Some 41 percent said they were very satisfied and another 39 percent were satisfied with the current state of affairs of their practice. Only ten percent admitted to being not satisfied. This same quotation suggests what it is about their practice that specifically pleases them. For 59 percent it is the personal relations with

their patients, for another 47 percent it is the gratification of general practice itself, and for 42 percent it is practicing in the type of area where they presently are. Thus, one doctor stated that "I went into general practice because I like all phases of medicine. I like it all. I think that's pretty good for twenty years!" Another noted regarding the area that "I like it --- or I'd move! I just happen to like practicing in the country. I've tried both." On the other hand, independence, which was thought likely to be a highly valued consideration of these doctors was mentioned by only 15 percent of them. In contrast, variety, whose absence in rural general practices is often commented on, was in fact a feature of their practice that 15 percent found most rewarding. No other aspects of their practice were mentioned by a substantial number of the doctors.

While most of these small town physicians were either satisfied or very satisfied with their practices, this does not mean that they do not have any problems with their practices or are unaware of such problems. Comparable to the small proportion of doctors who admitted to being dissatisfied with their practice, an equally small proportion (8.5 percent) considered that they had no problems. The ones most frequently mentioned were malpractice (50 percent), long hours-lack of coverage (47 percent), and office paper work-Medi-Cal billing (44 percent). The following comments illustrate these three problems:

> "Malpractice is a real critical issue now. It might even be the undoing of a lot of small rural hosptials...I'm going to drop some of my work. No OB. I'll curtail my surgery. It will have an impact on the hospital. OB patients will have to go elsewhere." (34-91)

"It's busy. The demands on your time I'd rank as most problematic. People in the community depend on you. It's hard to divorce yourself from your personal relationship with the community. There are lots of demands on your time outside office hours. They come to your house. For time off you have to leave town." (33–95)

"Collections. Paper work is the primary problem. Inadequate reimbursement. The whole Medi-Cal program." (35–70)

Less frequently mentioned but still noteworthy were problems with respect to hospital facilities (noted by 26 percent), while the problem of referral arrangements was identified by only 7 percent. Significantly missing from their comments are such problems as professional isolation or routine and unchallenging work, all of which are prominently mentioned in discussions of the rural physician. For this set of physicians these, as well as other problems mentioned by only a few, were apparently not important enough to deserve mention or possibly even to reach awareness among the majority.

Of the three major problems mentioned only one is distinctive of small town medical practice. Lots of doctors work long hours. It may be more a difference of degree than kind, but the small town doctors studied tend to feel a sense of responsibility for the health of the people of their community, which obligates them to make their services available. The result is many patients, long hours, and little relief. The malpractice and paper work problems are developments affecting most practicing physicians. In the case of malpractice the rural physicians, as they report it, are infrequently the subject of malpractice law suits. They see the problem as centered in the cities and caused by urban doctors and their clients. They are affected in that insurance rates are rising for various high risk activities, like general surgery, which they also perform. The solution for many of them is to drop

those activities on which insurance premiums have grown dramatically, such as anesthesia, obstetrics, general surgery. The consequences of such restrictions of practice are not visible in these data, but if this develops as a firm trend, its effect on the availability of medical care should certainly be examined. The third major problem, increased paper work, is one that is quite general in modern medical practice and represents a long-term trend. However, it has been exacerbated by government programs like Medi-Cal. Generally using a small office staff to handle a relatively large patient load, it is not difficult to understand how the need to complete increasing numbers of forms can become a serious problem.

In general, neither the community quality variables nor the community health facility variables were related to the various satisfactions or problems, either as specific items or when combined into satisfaction and problem scores. The one exception is region. While there are no systematic differences between mountain and valley doctors with respect to the different problems or the problem score, there are important differences regarding satisfaction. Mountain doctors tend to be more satisfied both with their practice and their work arrangements than valley doctors though the difference does not quite reach statistical significance. On the other hand, there is a very significant contrast on the satisfaction score which combines all the satisfaction items, with the mountain doctors scoring very strongly higher (Table 6–1).

The career variables, in turn, show a rather distinctive pattern of relations to the satisfactions-problems complex. Whether their medical school was local

or out-of-state, when they graduated, or how they learned about the community are unrelated to the satisfactions-problems information. In contrast, those aspects of the physician's career reflecting change are related. Physicians who have never tried a different organizational form of practice, e.g., have always been in solo practice, have higher satisfaction scores (Table 6–2). Furthermore, those physicians who have practiced in only one town are more satisfied with the personal relations aspect of their practice though they do not have higher overall satisfaction scores (see Table 6–3). Thus, it appears that among this set of doctors those who picked a town, set up a practice there, and stayed are the ones who hold the more positive views of their current practice situation.

While the different aspects of the physician's current practice situation proved to be unrelated to his views on practice satisfactions and problems, several of the features of his professional and community situation are significantly related to these matters. Those doctors with high scores on activities that keep them abreast of developments in medicine are less likely to view professional isolation as a problem. They are also likely to view their personal relations in their practices as a source of satisfaction though not the region where they practice. In addition, physicians with higher physician contact scores expectedly tend not to view professional isolation as a problem. More surprisingly they also have higher problem scores (see Tables 6–4 to 6–7). Finally, as seen in other sections, there were no significant relations with local medical society activities. Regarding the community situation, those physicians with higher community participation scores tend to view their medical coverage situation and malpractice situation as problems

(Tables 6–8 and 6–9), although again they do not have higher problem scores. These various findings fit no simple pattern. Aside from the understandable inverse relation between activity or contact and the isolation problem, more problematical is the link between contact (physician and community) and problem score. Possibly the more involved physicians are more conscious of these problems as a result of the greater contact with other physicians and laymen outside their practice.

One particular area of medical practice that was explored with these doctors was their views of their patients. Aside from the physician's work environment, which he creates himself in large part no matter where he is, both the people environment, the kinds of persons with whom he comes in contact, and the physical environment of the small town with its physical hinterland were considered of potential importance to the doctor who practices in the rural areas of California. Most of the physicians (94 percent) said that they enjoyed their patients and when asked to be specific they emphasized two qualities. The first is what might be called the realness, or genuineness of their patients. One doctor commented:

> "In this area there aren't any phonies. They're genuine, friendly people. I don't know about most rural areas, but this valley is provincial. It could be a disadvantage, depending on your way of thinking. Here 99% are friendly, honest, sincere. Those who come out from the city have exhausted their phoniness, I think, by the time they get here." (67–79)

Other expressions used were "just nice people", "down to earth", "good people". The second quality was a syndrome of being appreciative, responsive, trusting. According to one of the doctors:

> "They're human beings. I would enjoy patients in the city, too, but rural people show more appreciation to the doctor. I have a large number of Spanish-speaking patients because I speak Spanish fluently. As a group, they are especially appreciative and respectful of physicians." (63–83)

"They appreciate good care." "Their trust and confidence gives you a boost." "They're appreciative patients." It is possible that the interested, cooperative, appreciative patient that is often posed as an ideal can be found more frequently as a reality in the small towns and rural areas of California. Appreciative and trusting patients are also easier to work with. It is even possible that the much mooted doctor-patient relationship, which has so eroded in recent years in urban populations, survives in a more authentic form in these small towns. Asked whether he enjoyed working with the patients he sees, one doctor essayed the following:

> "It goes back to the relationship. Now I don't have any captive patients. They come of their own free will. It allows mutual trust and respect; no one is forced to come. This is the happiest relationship. Its hard to work with the ones you don't get along with. It's partly personality. I think medical care is a very personal thing. The patient needs an interested, concerned physician. This situation here allows that relationship to develop." (63–98)

This may sum up for many of these physicians what they look for and what they think they have found in the small towns where they practice.

Most of the doctors (85 percent) also consider that they are well acquainted with their patients. For most of them this is considered a valuable aid to their care: "I know what's really bugging them. I know if there are money problems or marital problems. I know the pressures and stresses. It helps me to figure out what's wrong with them." (69–75). The corollary is that it can make the work easier: "It cuts the time you spend taking histories way down." (72–82). "You get so you understand how closely they will follow instructions...." (72–52). On the other hand, close acquaintanceship can also lead to problems. Patients encountered on the street will ask for a quick diagnosis, or they will want to take up the time of an office visit with community gossip. Despite this near unanimity on liking patients, on knowing them well, and on the value of this acquaintanceship, fully 55 percent of the doctors also view their patients as a source of problems. These problems in many cases are the reverse of what these doctors value in their patients. One doctor well expresses some of the more prominent ideas:

> "Five percent (of patients) can make life miserable, though. How? One, they refuse to follow the doctor's orders. Two, they want to make their own diagnosis. Three, the appointment system. They don't want to wait. We have appointments, but we do have emergencies that interrupt them. The things I like are when patients are very cooperative, they will call me for the right things, they're well trained." (68–13)

Thus, it appears that a good many of the qualities that these doctors admire in their patients are directly related to their medical practice. They are qualities that from the perspective of the physician facilitate his care of his patients. They enable the doctor to get done what he thinks needs doing. In urban centers this has become a much more contentious matter, which also may make small town practice rather more attractive than otherwise.

A second topic of inquiry was how these doctors viewed the relative advantages versus disadvantages of solo practice, which most of them were following, compared to nonsolo forms, like partnerships or small groups. While several advantages were mentioned, on only one was there any marked consensus. Independence was named by 62 percent of the physicians. As expressed by one, "Autonomy — I like being my own boss, making my own decision...". (41–47). On the other hand there was a much wider diversity on disadvantages (see Table 6–10), which included lack of coverage, lack of colleagues, and long hours among the more important, but still named by only a minority of the doctors. For the most part, the advantages of any nonsolo form of practice were viewed as correcting these same problems of solo practice. Another doctor or two in the office would make it possible to arrange time off periods, shorten the hours by rotating weekend duty, discuss cases informally. However, the problems of working with others were quite distinctive; perhaps the obverse of independence. Working with another doctor was viewed as a source of personality conflicts, practice conflicts, and various other conflicts (see Table 6–11) and most of these doctors wanted no part of such problems.

A third topic concerned the attractions and distractions of small town practice and how to make it more attractive to physicians. Some doctors spoke primarily of factors that eliminated rural areas from consideration when deciding to locate one's practice, others of factors that attracted doctors to a rural small town location, and others of the factors that prompted a doctor to leave the small town setting after having practiced there. These various factors were grouped as to whether they referred primarily to medical practice considerations, environmental location considerations, or personal

TABLE 6-10

PERCENT DISTRIBUTION OF
DISADVANTAGES OF SOLO PRACTICE

	Number	Percent
Business Aspects	12	16.4
Coverage	42	57.5
Lack of Colleagues	26	35.6
Long Hours, Heavy Demand	21	28.8

TABLE 6-11

PERCENT DISTRIBUTION OF
DISADVANTAGES OF NON-SOLO PRACTICE

	Number	Percent
Business Aspects	3	6.8
Liability for Partners	2	4.5
Practice Style Conflicts	10	22.7
Personality Conflicts	18	40.9
Unspecified Conflicts	15	34.1

TABLE 6-12

PERCENT DISTRIBUTION OF PHYSICIANS
WHO PLAN TO CONTINUE PRACTICING IN THEIR TOWN

Plan to Continue	Number	Percent
Yes	75	78.9
No	7	7.4
Don't Know	13	13.7
TOTALS	95	100.0

considerations. As these doctors see this situation, physicians do not come to rural areas primarily because of medical practice considerations. What they identify as keeping others away are the familiar list of long hours, professional isolation, low income, lack of technical support, limited medical educational resources. The physician that comes, in their view, is motivated primarily by environmental location considerations, such as small town life, the lack of traffic and smog, the open spaces, the outdoor recreation. But they leave again because of practice considerations. The income is too low, the demands are too great, plus some environmental pressures, like inadequate schools for the kids or activities for the wife. Their view of how others see their situation is not very different from the way much of the literature describes it. Yet it does not hold for these physicians. True, they do have problems, but none of these is considered critical for themselves. Obviously there are areas of these doctors' worlds that different individual physicians would like to see improved. And from a medical standpoint there may be areas that deserve improvement. However, of more pertinence here is that these physicians in general recognize no critical problems that require them to reconsider their decision to practice in California's small towns.

The ultimate test of what balance, positive or negative, has been struck by these doctors in their present situation is whether they remain in small town practice. Overwhelmingly their present intent is to continue, with 80 percent opting to stay at the time of the interview (see Table 6–12). Only eight percent said that they intended to leave, which would seem to be a reasonably modest figure for turnover. That this large a proportion of the doctors has a

very positive view of his current situation suggests that the generally negative views encountered in many medical and health-related circles may not accurately reflect the realities of small town medical practices. This point is implied in the comments of several doctors who spoke about the general problem of attracting doctors to rural areas. Said one, "Lots of doctors who say they're not interested in a small town would like it if they knew what it was all about". (61–75). Another doctor, after indicating his income was higher than the national average while his expenses were far lower than he would find in the city, concluded by saying, "Really, monetary factors aren't the primary reason I'm staying. I'm staying because it's the best place in the world to practice medicine, for me, my needs, and assets". (62–44). It seems clearly to be a good place for most of the physicians in this study and would seem to have that same potential for others. What this implies for recruiting physicians to rural small town regions of California will be discussed in the next section.

Table 6-1.
Satisfaction Score by
Region

	REGION	
Satscor	Valley	Mountain
Low	73.3	45.7
High	26.7	54.3
	(N=60)	(N=46)

$X^2 = 7.29$; df = 1; $p < .025$

Table 6-2.
Satisfaction Score by Tried
Another Practice Arrangement

	TRYANOPR		
Satscor	Always Same	Nonsolo To Solo	All Other Changes
Low	45.9	72.1	50.0
High	54.1	27.9	50.0
	(N=37)	(N=43)	(N=12)

$X^2 = 6.04$; df = 2; $p < .05$

Table 6-3.
Number of Towns Practiced in by
Satisfaction with Personal Relations

	SATPRL	
Townspr	Yes	No
One	47.6	23.8
Two	30.2	35.7
Three or More	22.2	40.5
	(N=63)	(N=42)

$X^2 = 6.83$; df = 2; $p < .05$

Table 6-4.
Keep Up Score by Professional
Isolation a Problem

	PROFISOL	
Keepupsc	Yes	No
Low	66.7	35.3
High	33.3	64.7
	(N=36)	(N=68)

$X^2 = 8.10$; df = 1; $p < .005$

Table 6-5
Keep Up Score by Satisfaction
with Personal Relations

	SATPRL	
Keepupsc	Yes	No
Low	36.5	64.3
High	63.5	35.7
	(N=63)	(N=42)

$X^2 = 6.72$; df = 1; $p < .01$

Table 6-6
Contact Score by Professional
Isolation a Problem

	PROFISOL	
Contscop	Yes	No
Low	72.2	51.5
High	27.8	48.5
	(N=36)	(N=68)

$X^2 = 3.37$; df = 1; $p < .10$

Table 6-7.
Contact Score by Problem Score

	PROBSCOR	
Contscor	Low	High
Low	70.0	50.0
High	30.0	50.0
	(N=50)	(N=56)

$X^2 = 3.59$; df = 1; $p < .10$

Table 6-8.
Community Participation Score by
Problems with Patient Coverage

	COVERAGE	
Partscor	Yes	No
Low	30.0	52.7
High	70.0	47.3
	(N=50)	(N=55)

$X^2 = 4.66$; df = 1; $p < .05$

Table 6-9.
Community Participation Score by
Problems with Malpractice Insurance

	MALPR	
Partscor	Yes	No
Low	30.2	53.8
High	69.8	46.2
	(N=53)	(N=52)

$X^2 = 5.10$; df = 1; $p < .05$

7. Conclusions

This study has examined a special type of doctor, the established small town primary care physician. It is a type that has been steadily declining in numbers and is consequently the object of much concern. Various reasons have been offered to explain this decline and a variety of proposals made to arrest it, as discussed in Section 1. Few of the explanations and fewer of the proposals have gone unchallenged, for the subject is many-faceted and prone to differing interpretations. While no single study can hope to settle all the issues, it can illuminate some of them. Much of the recent research has concentrated on those physicians about to locate their practice or who have recently chosen their location and they have sought to learn what factors influenced their decision. A few others have sought out physicians who have relocated from nonmetropolitan to metropolitan settings and have asked what prompted their departures. The present study has returned to the established small town physician, the survivors, and tried to learn about those aspects of his situation that have been identified as the major sources of difficulties for the small town practicing physician. These difficulties, like the lack of relief from patient demands or the absence of professional colleagues, have been viewed both as discouraging physicians from entering small town practices as well as driving those in such practices away from the small towns and rural areas of this country.

In the previous sections the results of this inquiry have been presented. No attempt was made to test any specific set of hypotheses. Instead, a large set of conditions thought to be important to a working physician was explored in

relation to an equally large set of influencing conditions. First, one background topic was examined (medical career), then the three major situational topics (practice, professional, and community), and finally the physician's own views of his situation. Each of these sections discusses in detail the research findings. It would be redundant to repeat these here. Instead, this section will concern the implications of the findings, especially the policy implications that these may have regarding the decline of the small town physician.

In considering the findings of this study it is important to keep in mind that it is a special category of physicians that is being discussed. The findings apply to general or family practice physicians primarily who are in their mid-years of 35 to 60 and who are practicing in communities where 5 or fewer doctors were currently in practice. Keeping in mind how doctors are concentrated in larger towns and urban centers (Appendix 1), these are the less than one percent of California's physicians who are scattered throughout non-metropolitan California and providing physician care to the small town and rural populations of this huge area of the State. While virtually the entire population of these physicians was interviewed in the counties chosen for study, two major regions, the coastal counties and the southern counties, were not included. Therefore, the findings apply only to the central valley and mountain counties until corroborating evidence becomes available.

In addition to the distinctive features obtained by design, the study itself has shown that these physicians exhibit several other distinguishing characteristics. They tend to be middle-aged or older. They also tend to have been

practicing in their present community for a good many years and to a lesser extent to have practiced in only one community during their professional career. And they are overwhelmingly solo practitioners. This combination of age, tenure, and stability suggests that we are in fact dealing with a set of physicans who have followed an alternative career path out of the mainstream of specialist urban-based medical care. They cannot be considered harbingers of the future, but it was not expected that they would. On the other hand, they appear to well represent the major concern of this study. These are physicians who opted to go to the small towns of California to practice medicine and they have succeeded in these practices — at least to the extent that they are still practicing there but surely also with reference to the large numbers of persons receiving care, their own sense of satisfaction, and other reflections of success that have been discussed in the earlier sections.

Overall, the picture that emerges is a group of doctors with busy medical practices seeing large number of patients daily who generally have hospital privileges but whose work is primarily office-centered. They typically have a variety of colleague contacts, including those through the local medical society, and participate in various activities to keep abreast of developments in medicine. They tend to be moderately involved in community affairs, while generally having a positive view of their local community. This overall characterization does conceal some important variation but nonetheless holds true for the majority.

Where comparable studies exist, they tend to support the findings of this investigation, which suggests that there are some generic constraints or

properties in small town physicians' work. Such studies primarily concern the doctor's practice. Beyond adding additional supporting data to what is known of small town physicians, there are two divergent findings that stand out in reviewing the earlier discussions. The one is that the many problems that are usually attributed to rural or small town medical practice and are frequently used to explain the decline in such practices find little support in this study. Such reputed problems as the unmanageable range of work, the boring uniformity of the work, the professional isolation, the lack of hospital facilities, or the stultifying nature of the small towns are generally denied and the opposite asserted. Other problems, like being overworked or lacking weekend replacements, tend to be viewed as manageable issues and, thus, not serious problems. This assessment is based both on the information describing the doctor's situation as well as on his own views of his situation. While some doctors do experience these problems and are acutely sensitive to them, the majority do not and are not. As suggested earlier, it appears that current views of the problems of small town medical practice are distorted by the dominance of an urban medical practice or medical education perspective.

That the situation of these small town doctors is not as problem-ridden as generally thought does not mean that their situation is ideal, either by their own standards, those of their professional peers, or those of the training centers. This study has not attempted to evaluate these doctors by any set of independent criteria and has nothing to say about the quality of these doctors, their practices, their professional relations, or their community relations. The quality issue certainly has a bearing on any general evaluation of rural medical practice, but it is a complex question that this study could not include.

Since there is so little evidence among these physicians of the "problems" of rural medical practice, the possibility must be considered that this type of practice has much more potential than is usually considered. The doctors interviewed consider their work with patients to be interesting, even exciting. They generally acknowledge the heavy demands made on them but temper this with the rewards they experience from patient and community. In the words of one doctor:

> "For the guy who's coming in here, it's just his cup of tea. He and his wife love the outdoors. Really, the doctor in a town like this will be worshipped. All his bad feelings about himself disappear. It's a real big advantage. You feel very satisfied and you give them total care. I only refer five to ten percent away. I didn't get the bug to be a family practitioner until I came out here to intern. I met this really dynamic guy who sold me on general practice and a family practice residency. Really, it was all due to him. He just convinced me that it was the most exciting thing going. And I've never been sorry." (61-63)

This is only one comment, but it reflects a perspective widespread among these doctors. They do consider general practice or family practice in California's small towns to be the best thing going. Of course, these are older physicians. This has the advantage here that their views represent experienced views. They have seen and experienced most of the assests as well as liabilities of small town general practice and speak from a position of knowledge. The disadvantage is that they cannot speak for the current generation of doctors in training and those about to establish their first practice. One question in this connection is the extent to which new doctors view small town medical practice from the problem-ridden perspective of much of the literature rather than the positive terms of the doctors in this study who practice in that setting.

In addition to the question of having a more accurate, realistic perspective on small town practice there is the issue of whether the current medical training programs adequately prepare a doctor, any kind of doctor, for small town general practice. A number of the doctors interviewed have had medical students or residents working in their offices as part of the student's training program or have participated in teaching at a medical school. Comments from these doctors tended to emphasize how medical training unsuited young doctors for small town practice. In their view, current training does not prepare a physician to cope with the large array of medical problems brought to him by his patients. Instead, their skills are focused on narrow ranges of problems. The corollary of this is that they are taught to work closely with and depend on a large set of specialists. What these doctors see as inappropriate modern medical training is well described in the following comment on one of the State's medical school family practice training programs:

> "It's a good program, but it's not turning out people who will go to rural areas. Why not? I guess it scares the hell out of them! They're not prepared for a broad-based general practice. There are only three specialists in this county. Young doctors aren't prepared for this. I don't think the product they're turning out is a primary provider. Maybe there isn't a place for them anymore. Here — yes, there's a need for them. We do use consultation, transfer patients if necessary. But probably eighty percent of the patients at our hospitals don't have to leave the county. We can do this day-to-day stuff. Being able to work alone is even more imperative in the mountain counties. I'm going on thirty years' experience. I'm impressed by the young men coming out of medical school today, but they're not prepared for the whole gamut." (62–95)

Thus, the potential that these doctors see in small town general practice, along with the evidence presented of a very restricted sense of problems and

limitations, cannot be applied in any simple fashion to orient and direct young physicians to rural and small towns in California. Until medical schools take a more realistic position regarding the positive potential in small town medical practice and translate this potential into appropriate undergraduate and graduate training efforts, the doctors they graduate are likely to be handicapped in entering such practices. This is not to say that a less stereotyped, more realistic view of small town medical practice should not be provided medical students and residents or that it would not be helpful. For example, it would give them a better sense of what to seek in their training. However, its usefulness in interesting young doctors in small town medical care and attracting them to such practices will probably be limited if such information is in conflict with their medical education.

The second divergent finding of this study is of a different order. The preceding quotation made special mention of the mountain counties. Running through the earlier sections are references to strong regional differences. The obvious contrasts in physical ecology, population, and economy between the central valley region and the mountain ranges on the east and north suggested the search for possible regional differences and a number were found. The communities themselves differed. The valley towns tended to be larger and have a lower proportion of the population in the labor market, while the mountain towns have populations somewhat better educated and with higher average incomes. Valley doctors are older and have been practicing in their communities longer than the mountain doctors. The mountain doctors, while not fledgling physicians, tend to see fewer patients and, thus, have lower incomes than their valley counterparts. The valley doctors in addition are much more

involved in local business activities. However, the mountain doctors are more satisfied with their practice and feel more positively about their community.

These regional contrasts have no single explanation. The interrelations of population and economy with medical practice, with career, and with the changing national scene, such as the rise of the ecology movements, probably underlie these regional differences. More important are the implications for small town medical practice. The most obvious is that it is not very useful and can be seriously misleading to discuss problems of rural or small town medical practice with reference to the State as a whole except in the most general terms. The mountain and valley regions compared here clearly provide different contexts for medical practices, which have influenced the divergent development of these doctors and their practices. Another important region, omitted in order to make the interviewing manageable as well as to avoid trespassing on a similar study, is the Pacific Coast. The distinctive coastal region would probably show contrasts as prominent as those found between the valley and mountains. The same is likely true of the southern nonmetropolitan part of the State. Thus, there are at least two additional major regions where small town medical practice may follow a somewhat distinctive path, which should be documented.

Aside from emphasizing the general importance of considering regional forces in assessing the medical manpower situation in nonmetropolitan California, the details of regional differences provide some specific implications regarding the disappearing small town physician and efforts to counter this trend. One is the strong attraction that the mountain region has on its

doctors compared to the valley. That the mountains strike these physicians as more attractive than the central valley should not surprise anyone who has traveled through these parts of California. What is worth noting is that the mountain environment appears to be exerting a definite positive force on its physician residents, while the valley environment is at best a neutral element. This difference suggests one type of environmental feature that should be utilized in efforts to attract physicians to the one area but should be minimized with respect to the other. Another is the dominant practice pattern: large patient loads, higher incomes in the valley, the reverse in the mountains. Such differences describe major trends and individual practices can and do differ substantially. Yet such information can also be used to attract as well as more generally to guide the making of an informed location decision. A third is the more widespread post-graduate study activities found among the valley doctors, which similarly can help to orient prospective physicians to what they can expect in one area compared to another. These contrasts in the practice and professional situations, like varying patient loads or efforts to keep abreast of medical developments, also identify areas that possibly deserve outside assistance or attention. These might be programs of post-graduate instruction or programs to introduce physician extenders.

There is a third finding, which has not received much attention in the previous pages but which may be quite important in considering practical efforts to cope with the declining numbers of small town physicians in the State. In discussing the background of the physicians in this study, it was pointed out that 32 percent of them were the graduates of two medical schools.

In other words less than one percent of the schools training this group of doctors provided almost one-third of these practitioners. It was not possible to investigate further this striking pattern, but it suggests some practical implications. Presumably both the type of student selected by these two schools as well as the type of training given them played an important part in their choosing small towns for medical practice. These two schools may still send a disproportionate number of their graduates to practice in small towns. This cannot be determined from this study because the younger physicians were excluded. Even if this is no longer the case, one or two medical schools could promote small town family practice medicine more energetically and obtain the same result.

The fact is that small numbers of additional physicians can make a difference in the small towns and rural areas of California. If 5 percent of the graduating class of 2 medical schools, taking 100 as an average class size, were to select a small town family practice for their careers, this would add 10 physicians each year. In 5 years these physicians could extend medical coverage to 50 communities lacking physicians or with physician shortages. Since there were only 69 communities in all central and mountain California with 5 or fewer practicing physicians in the age range 35–60, it is likely that this small number of additional doctors would markedly increase medical coverage in nonmetropolitan California. Certainly there are other factors that must be considered in assessing the need for a physician in a nonmetropolitan region, such as population size and proximity to existing medical practices. Yet the implication remains clear that the success of a few medical schools in influencing a few of their graduates to follow a small town

family practice career could substantially affect the nonmetropolitan medical shortage problem.

Finally, it seems appropriate to set out a few specific recommendations that follow from these conclusions that appear to be useful in improving the availability of physicians to nonmetropolitan populations. Most of these recommendations are practical courses of action to follow up what has been learned through the interviews conducted with this group of doctors.

1. Inform Medical Students. Basic information on the conditions of medical practice, professional relations, and the local community in nonmetropolitan California needs to be digested from this and similar reports and put into the hands of medical students. Keeping in mind that only a small proportion of California's medical students are needed in the State's small towns, accurate information and not stereotypes should be available to the interested or potentially interested student.

2. Inform Residents. It is just as important to provide this same information noted above to medical residents. It probably comes too late to help them form their views, but it is equally important in that they are at the point of making their decisions regarding the location of their practice. For them the completeness and accuracy of information of the type collected in this study, such as the differences between mountain and valley medical practices, could be decisive in the decisions they make regarding where to locate.

3. Inform Incoming Doctors. Those physicians contemplating a move to California from another state should, like medical residents, find this range of information useful both in deciding whether to immigrate and especially where they might want to try to establish their practices.

4. Register Shortage Communities. A directory of communities and areas without local physicians or with too few physicians should be compiled and kept up-to-date. This information should be made available to medical schools, medical students and residents, out-of-state doctors, medical societies, and planning groups. The development of such a registry should, of course, be coordinated with allied efforts under way by manpower, area planning, and regulatory groups in the State.

5. Inform Medical School Faculties. In view of the influential role of medical school faculties in orienting students and residents to medical practice, it is particularly important that the views and conditions of small town practitioners be known to these influential physicians. Of special importance are those physicians in the school administration as well as those in departments of medicine and family practice. While this information may make no converts, it might help to correct the present dominance of urban viewpoints.

6. Enlist Medical School Faculties. Recalling the substantial effect one or two medical schools might have on directing graduates to nonmetropolitan areas, efforts should be made to encourage or promote such interests in sympathetic schools or their appropriate departments. Identifying small

town shortage areas, working with such communities to make possible student visits as well as student work-learning experiences, helping to promote with the medical schools medical care demonstration projects, and coordinating state programs with medical school training to support the development of small town medical practice are some examples of efforts that could reinforce the interest of a few medical schools in promoting this type of medical practice.

Underlying these suggestions is the central conclusion of this study that small town medical practice is not as bad as it is generally portrayed, that for some doctors it is actually very good. A related conclusion is that these doctors, the small town general practitioners, are not the anachronisms of the modern medical world as often portrayed. They see large numbers of patients, hold hospital appointments, have contacts with other physicians, spend time in keeping abreast of medical developments. In short, the stereotype of the small town general practitioner does them an injustice. If a few of the several hundred medical students in California, reinforced by a few of the several hundred of their teachers, can be made aware of this situation and provided with accurate information, it may change a few views as well as a few decisions. Such changes could help lessen the shortage of small town doctors even though medical students and medical school faculty are but two pieces in the much larger picture puzzle of American medical care.

The small town doctor is currently at the center of several growing issues in medical care. One is the role of the primary care physician in providing such care in the future and the related issues of physician specialization plus the

part to be played by the paramedical occupations. A second is the distinctive situation of the rural or nonmetropolitan population with respect to health problems and health services. A third is the debate over how to organize the provision of medical care, frequently linked to the issue of medical insurance. The physician's role and responsibilities are key ingredients in every one of these issues. The better we understand his current role and situation the better we can deal realistically with such issues. Unfortunately, outdated, distorted, or stereotyped information and ideas are likely to lead to confusion and misunderstanding. This report hopefully will contribute to a more accurate view of the small town doctor and thus to more productive discussions of how to deal with the shortage of such doctors.

8. APPENDIX 1: THE COMMUNITY ENVIRONMENT

The community setting can affect medical practice in several different ways. It defines and characterizes a potential client population, which can be large or small, growing or declining, generally well-off or impoverished. It provides desired work facilities, like offices, nursing homes, ambulance services, and especially hospitals. These facilities can vary from few and of poor quality to plentiful and of generally high quality or in between. The community setting also defines a social and civic environment as well as a recreational environment. Studies of physicians' decisions regarding where to locate their practice have generally identified one or more aspects of the local community as significant in the making of those decisions. These have included rural small town style of life (Martin, et al., 1968), recreational opportunities plus clinical support facilities and personnel (Steinwald and Steinwald, 1975), and opportunities for social life for physicians locating in rural small towns (Cooper, et al., 1975). Other studies have examined community characteristics in relation to the geographic distribution of physicians. Among their findings is that towns without physicians are likely to have low or declining economic growth rates (Fahs and Peterson, 1968) and that towns acquiring a new physician are likely to have populations with higher than average incomes and education (Parker, et al., 1969).

These various findings emphasize in different ways the importance of the community setting to opening a medical practice in rural small towns. Since published data were available to describe certain features of the 69 communities included in this study, these data were examined to determine what

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they would tell us about the communities of this special group of primary care physicians. Information on two aspects of these communities, which have figured in earlier studies, was available for analysis: population information and health facilities information. Both help define the quality of the community in relation to medical practice.

Table 8-1

Community Population Characteristics

	Mean	Standard Deviation
Population Size	2,576	2,044
Foreign Born (percent)	5.7	4.0
California Born (percent)	54.9	7.1
Completed High School (percent)	48.8	14.7
Unemployment Rate (percent)	8.9	3.0
Nonworker to worker ratio	1.76	2.84
Median Family Income (dollar)	$ 8,208.51	$1,377.73
Percent Earning Greater or Equal to $15,000	13.9	5.1

Source: U. S. Bureau of the Census, 1970 Census of Population: California, 1971

The information on population characteristics of the 69 communities is summarized in Table 8-1. Several points in this table stand out. First, variation in population size (seen in the standard deviation) is almost as large as the mean, indicating a wide range of community size. In fact, population size varies from 300 to 11,640 persons. The mean community size of 2,576 persons actually approaches the U. S. Census criterion for defining rural populations (places less than 2,500 persons). Second, there are some considerable differences between these communities, reflected in the large standard deviations. Some have virtually no foreign-born. Some have moderate to little unemployment, but others have rates as high as 15 percent or

higher, suggesting a serious employment problem. In sum, the communities tend to be small with populations earning moderate incomes and of local origin, but at the same time there are some very contrasting communities in this set of 69. Whether some of the differences are themselves related to each other will be examined later in this section. It remains to note here only that a considerable range of difference in the populations of these small towns is apparently quite compatible with small town medical practice.

Table 8-2

Community Medical Care Resource Characteristics

	Mean	Standard Deviation
Number of Physicians	2.6	1.3
Number of Medical Care Facilities	0.6	0.7
Medical Care Facilities Within 20 Miles	14.1	16.2
Hospital Beds	81.3	88.4
Hospital Services	8.4	6.8
Bed Occupancy (percent)	56.2	18.5

The distribution of medical care resources continues the pattern of marked contrasts between communities (see Table 8–2). In this case it is even more pronounced. The mean number of physicians per community (2.6) largely reflects the way physicians were selected for the study, i.e., towns with five or fewer physicians. While almost 30 percent of the communities have 5 doctors, approximately 40 percent have either 3 or 4, and some 30 percent have either 1 or 5. All communities had to have at least one doctor to be included in the study. This was not true of the other medical care resources. Thus, a mean of 0.6 medical facilities, which are primarily local hospitals or clinics, means that many of the towns do not have any. In fact 44.0 percent of the

communities have no medical care facility, while an even larger proportion (56.2 percent) have no local hospital. All of the towns have doctors, but virtually half of them lack that significant adjunct of medical practice, a hospital. This contrast between towns can be misleading because regions of low population density will not be able to support an extensive hospital network, such as a hospital in every community regardless of its size or wealth. Rather a hospital in one town will have to serve the area population of several small communities as well as those residing in the adjoining countryside. This situation can be seen in the present case where somewhat less than half the study communities have hospitals, but most of the 106 physicians have one or more hospital memberships which they use relatively frequently (see Section 3). Thus, the regional distribution of medical care facilities must also be taken into account. This was attempted in the present instance by examining the location of such facilities within a 20-mile radius of each of the 69 communities. As shown in Table 8-2 most of the towns are likely to have several medical care facilities within this zone and potentially accessible to them, but again there are marked contrasts between the communities. Some have only 1, some have 2 to 3, others have a half dozen or so. The range, in fact, is from 1 to 59 though most towns fall toward the lower end of this distribution. Twenty-eight of the 69 communities (40.6 percent) have only 3 medical facilities or less within a 20-mile radius of town.

The hospitals within these communities continue to reflect the fact of marked contrasts. The average bed capacity of 81.3 in the local hospitals is somewhat deceptive due to a couple of towns having hospitals with over 200

beds. In fact, over half of the hospitals (54.5 percent) in these communities have less than 50 beds. In addition, the occupancy rate tends to be low for these hospitals. Forty-two percent of them have a rate under 50 percent. It ranges from a high of 88 percent to a low of 22 percent.

What stands out in reviewing this information on community population and health facilities is the extent of the differences in comparing one community with another. Communities characterized by widely differing circumstances, differing populations, and differing medical facilities apparently provide equally hospitable environments for primary care medical practice. There is no single combination of type of population and medical facilities that predominates in this set of communities which have been able to attract and retain a practicing physician.

Since the medical care resources, especially the medical care facilities, of small towns are likely to be so influenced by the town's regional circumstances, briefly examining this context may clarify the distribution of medical care resources observed for the towns. Over half of the 25 counties where the 106 physicians are located have 50 percent or more of their doctors in general practice (see Table 8–3). The counties marked by an asterisk (*) contain metropolitan communities. These counties possess both the greatest number of practicing physicians as well as the highest proportion of specialists. This situation conforms to earlier work showing that the degree of medical specialization is highly related to level of urbanization (Rushing, 1975). In turn the more rural counties i.e., the 21 without a metropolitan area, generally contain the highest percentages of physicians in general

practice. Finally, the counties with the highest percentages of physicians in specialty practice have the largest number of hospitals. Thus, even in this set of counties, which excludes California's major urban zones, concentration of physicians and specialists in the counties with urban centers still holds.

Table 8-3

Non-Federal Physicians Providing Direct Patient Care

County	Total Number of Physicians	Percent in General Practice	Percent in Speciality Practice	Number of Hospitals
Amador	12	58.3	41.7	1
Butte	152	32.2	67.8	6
Calaveras	17	47.0	53.0	1
Colusa	12	66.6	33.4	1
El Dorado	52	42.3	57.7	3
Fresno*	533	21.2	78.8	12
Glenn	9	66.6	33.4	1
Kern*	326	24.2	75.8	11
Kings	37	62.2	37.8	4
Madera	25	76.0	24.0	2
Mariposa	8	75.0	25.0	2
Merced	69	34.8	65.2	5
Modoc	2	100.0	-	1
Placer	101	38.6	61.4	3
Plumas	12	91.7	8.3	4
San Joaquin*	360	24.7	75.3	9
Shasta	119	29.4	70.6	4
Sierra	2	100.0	-	1
Siskiyou	25	64.0	36.0	2
Stanislaus*	254	27.2	72.8	9
Tehama	21	61.9	38.1	3
Trinity	5	100.0	-	1
Tulare	174	37.4	62.6	8
Tuolumne	26	50.0	50.0	3
Yolo	151	19.2	80.8	4

Source: Center for Health Studies Research and Development, American Medical Association, December 1973.

The influence of size of community on physician location can be further clarified by examining the distribution of physicians in each of the counties

by community size (see Table 8–4). The counties that contain metropolitan areas (Fresno, Kern, San Joaquin, and Stanislaus) have the highest percentages of physicians. What is more relevant to the present study, however, is that there is no particular size of community that serves to attract the largest proportion of physicians. Instead, whatever is the largest community in the county, whether it be communities over 50,000 in population or as small as 2,500-9,999, that is where the doctors will tend to concentrate. A corollary that is important to this study is that this generalization holds even for those counties that are primarily rural or semirural.

Comparison of the first two columns of Table 8–4 shows the same concentration occurring with respect to numbers of physicians and medical facilities when a county's communities all fall within the first two size groups. This suggests an explanation for some of the variation observed in examining the medical care resources of the 69 study communities. Thirty-nine of these communities have populations under 2,500, 29 have populations between 2,500 and 9,999, while 1 town has over 10,000 population. In summary, community population size exerts a strong influence at all size levels on the number of physicians, kinds of physicians, and number of hospitals.

Table 8-4

Distribution of Physicians (in Percent) by Community Size and County

County	Size of Community: less than 2,500	2,500 to 9,999	10,000 to 49,999	greater than than 50,000	N
Amador	100.0	-	-	-	17
Butte	2.2	18.6	79.2	-	183
Calaveras	100.0	-	-	-	14
Colusa	9.1	90.9	-	-	11
El Dorado	14.8	52.5	32.8	-	61
Fresno	4.8	7.4	4.5	83.3	516
Glenn	-	100.0	-	-	10
Kern	8.5	6.6	7.2	77.7	377
Kings	-	27.9	72.1	-	43
Madera	19.2	15.4	65.4	-	26
Mariposa	100.0	-	-	-	7
Merced	1.2	3.8	95.0	-	80
Modoc	100.0	-	-	-	2
Placer	19.4	44.4	36.3	-	124
Plumas	50.0	50.0	-	-	10
San Joaquin	2.7	3.4	20.0	74.0	415
Shasta	9.0	3.0	88.0	-	133
Sierra	100.0	-	-	-	2
Siskiyou	50.0	9.4	40.6	-	32
Stanislaus	1.0	9.5	13.2	76.4	296
Tehama	12.0	88.0	-	-	25
Trinity	71.4	28.6	-	-	7
Tulare	3.2	18.4	78.4	-	185
Tuolumne	17.6	82.4	-	-	34
Yolo	6.3	1.0	92.7	-	259

Source: American Medical Association, 1973 American Medical Directory, 1974.

In order to explore the possibility that specific features of those communities might be related to medical resources, first the population characteristics were correlated with each other, then the medical care resources, and finally the two sets of community data were correlated with each other. Table 8–5 shows the interrelationships between the community population variables for the 69 communities. Among the strong correlations (identified by asterisks) some, like that between percent completing high school and median

income, reflect well-known generalizations. A few represent correlations between measures of the same phenomena, such as that between median income and percent earning $15,000 or more.

The most important set of correlations are those with region, i.e., the valley vs. the mountain communities. Relatively high correlations can be seen between region and population size, percent foreign born, percent completing high school, nonworker to worker ratio, and median income. The communities included in the study are located basically in two areas of the State: the central valley that occupies the heart of California and the lower reaches of the mountain chain running along California's eastern border and including the lesser mountains in the north. These correlations indicate that the communities in these two regions tend to be quite distinctive. The towns in the valley area are more likely to have larger populations, a higher ratio of nonworkers to workers in the population, and a larger percentage of foreign born than towns in the mountain region. The latter in contrast have populations with higher percentages completing high school and higher median incomes. This strong regional contrast in turn explains the negative correlation between population size and percent California born. The larger towns of this study are in the valley region, which is also where the foreign born population tends to reside.

Aside from the expected correlations between the different aspects of the hospital (number of hospitals, number of hospital beds, number of hospital services, and occupancy rate) shown in Table 8–6, the strong relationship between number of doctors in town and number of health or medical care

facilities in town discussed earlier is borne out. Otherwise no especially noteworthy finding turns up in this table.

When the different population characteristics are correlated with the medical resource variables, several different patterns emerge (see Table 8-7). The various population variables are unrelated to the presence in town of medical resources with one exception. The larger the town population the more likely there will be a doctor and a health facility in town. On the other hand, when a regional rather than community unit is considered, many of the population variables are strongly but negatively correlated with having a health facility within 20 miles. These correlations are recapitulating the regional finding discussed earlier and reflect the denser network of communities in the valley region along with the distinctive population of this area compared to the mountain region.

From this examination of available census data on the communities, several findings are worth emphasizing. The first is the striking range of differences observed between the towns. At this opposite end of the urban spectrum this small fraction of California's doctors is found in communities of very diverse character. They range from hamlets to large towns, economically thriving to relatively stagnating, with well-off and well-educated populations as well as the opposite. Equally contrasting are their medical resources. A large fraction do not have a local hospital. A smaller but still large proportion have no medical facility at all. But in all of these towns are relatively well-established, long-tenured physicians. Not borne out in these communities are the indications from other studies suggesting that the presence of a physician is linked to high average income or economic growth.

Also worth reemphasizing is the strong influence of community size on the regional distribution of medical care resources, including especially physicians. While this relation is well-established for the larger rural-to-urban continuum, it also appears to be working at the lower end of small-to-medium-size towns of concern here and to underlie some of the contrasts between communities with respect to their medical resources. Finally, an unexpectedly strong regional influence that divides the communities into two sets, valley and mountain, was demonstrated. Towns in each set tend to reflect certain distinctive population and to a lesser extent medical resource characteristics. This regional difference in fact appears to underlie several of the otherwise puzzling correlations observed. It is also implicated in other findings of this study.

Table 8-5

Community Population Intercorrelations

	POPSIZE	FORBORN	CALBORN	HSCOMPL	RATIOWK	UNEMPL	MEDINC	EARN15	REGION
Popsize	1.000								
Forborn	.25**	1.000							
Calborn	-.52***	-.06	1.000						
Hscompl	-.21**	-.69***	.15	1.000					
Ratiowk	.04	.29***	-.10	-.65***	1.000				
Unempl	.10	.01	-.32***	-.11	.07	1.000			
Medinc	-.19*	-.56***	.37***	.88***	-.67***	-.20*	1.000		
Earn15	-.23**	-.46***	.31***	.80***	-.62***	-.22**	.86***	1.000	
Region	-.32***	-.34***	.09	.41***	-.37***	.23**	.40***	.23**	1.000

Significance Levels: * <.10
** <.05
*** <.01

Table 8-6

Medical Care Resource Intercorrelations

	MDSINTW	HFINTW	HOSINTW	HF20MI	HOSBEDS	HOSSERV	HOSOCCUP
MDSINTW	1.000						
HFINTW	.54***	1.000					
HOSINTW	.36***	.78***	1.000				
HF20MI	.00	.05	-.17	1.000			
HOSBEDS	-.21*	-.33***	-.48	.60***	1.000		
HOSSERV	-.19*	-.40***	-.53	.54***	.83***	1.000	
HOSOCCP	-.31**	-.41***	-.54	.36***	.56***	.48***	1.000

Significance Levels:
* < .10
** < .05
*** < .01

Table 8-7

Community Population and Medical Care Resource Intercorrelations

	MDINTW	HFINTW	HOSINTW	HF20MI	HOSBEDS	HOSSERV	HOSOCCUP
Popsize	.40***	.43***	.29***	.23**	-.01	-.10	-.23*
Forborn	-.04	-.07	-.28**	.44***	.16	-.01	.22*
Calborn	-.20*	-.16	-.27**	-.14	.00	.09	.08
High School Compl.	.17*	.05	.25**	-.48***	-.45***	-.29**	-.37***
Ratio Wk.	-.22**	-.19*	-.30***	.51***	.58***	.51***	.53***
Unemployment	-.06	-.08	-.04	.05	.00	-.09	.37***
Median Inc.	.19*	.08	.18*	-.41***	-.37***	-.20*	.33**
Earn $15 k	.16*	-.02	.08	-.33***	-.32***	-.11	-.34***
Region	-.07	.00	.16	-.42***	-.35***	-.39***	-.05

Significance Levels: * < .10
** < .05
*** < .01

9. APPENDIX 2: METHODS

A. Criteria for the Physician Sample.

In order to arrive at a representative sample of the target group (established rural physicians) criteria were required that would enable us to locate primary care physicians who were practicing in places where their numbers were relatively small. As a result, four requirements were set for physicians to be included in the sample: (1) in a county north of the Tehachapi Mountains and east of the coast range (note: Several counties in this area are not included because they had no physicians who met the other criteria), (2) in a full-time private practice in community listing five or fewer active physicians, (3) in a primary care speciality (i.e., general and family practice, OB/GYN, pediatrics, internal medicine), and (4) in the age range of 35 to 60 years.

B. Source of Sample.

With the sampling criteria noted above, the 1973 American Medical Directory, Geographical Register of Physicians was used as the sample source. The directory used was current to December 1973 with a new issue coming out every three years. The information available in the directory includes: physician's name, professional mailing address, year of birth, name of medical school and location, year graduated, year licensed, primary and secondary speciality, Board Certification, and type of practice.

C. Steps in Identifying Interviewees and Reasons for Exclusion or Loss.

After compiling a list of physicians from the American Medical Association Directory a series of steps followed to arrive at the final interview schedule:

1. Physician telephone number listing. Initially, the telephone directory was used to obtain the telephone numbers of each physician. Those with no telephone listing or those with a listing in metropolitan areas were dropped from the sample. It was assumed that those without telephone listings were not currently practicing in that area. The telephone company information service was used if numbers were not found in the local directory. Those whose telephones were disconnected were also dropped.

2. Next, letters were sent explaining the nature of the study and with a formal request for participation. Approximately one week after the letters were mailed, and later after interviewing trips were begun, each physician was telephoned for a tentative appointment for a half hour interview to be conducted in his office at his convenience. At that time, those found to be retired, no longer in town, practicing in cities, and only listing their vacation home in the American Medical Association Directory were also dropped from the sample. The table on the following page shows those finally selected for interviews and the number excluded or lost from the sample in each category.

SAMPLE SELECTION

Number of physicians in American Medical Association Directory meeting the sampling criteria 176

Number dropped as not actually private practice physicians (e.g., retired, salaried) 23

Number dropped because location not accurate (e.g., more than five primary care physicians in town, actually practicing in a nearby city) 25 14.2%

Number not locatable and presumed gone from the area (not in telephone directory, telephone disconnected). 17

SUBTOTAL 65

Number of physicians located and meeting the sampling criteria 111

Number who refused to be interviewed. 4

Number who could not be scheduled in time 1

SUBTOTAL 5

Number of physicians located, meeting sampling criteria, and interviewed . . .106

D. Timetable of Interviewing and Field Procedures.

The data were collected from the end of July 1975 to November 1975 by two graduate medical anthropology students and a research assistant using pretested interview forms (open-ended) and a separate questionnaire, which was given to each physician to be filled out at his convenience and returned by mail. From the final list of physicians, 106 interviews were completed in the field and 95 questionnaires were returned by mail. Only four physicians refused to participate in the survey. Physicians were telephoned on the day of their scheduled interview to confirm the appointment. The interview itinerary was arranged to begin in the southern part of the State and move to the north. Nine weeks were originally scheduled for field operations, with appointments made separately for each week. Scheduling of interviews was flexible to accommodate the varying travel times between towns. If sufficient appointments could not be made within the area specified for a particular week, it was possible to return to the preceding week's interviews to pick up those who could not make their original appointments or to go on to the following week's schedule for those able to change appointments to an advanced date. Therefore, the actual territory covered each week became broader as the survey progressed until a point was reached where those physicians failing to keep appointments for various reasons were left to be rescheduled for a final south to north sequence.

Field operations were planned to be completed by the week ending September 26, 1975, but were extended through October 1975 primarily

because of difficulties in physicians keeping scheduled appointments and the inability to plan precisely the time required to travel the vast distances to the various towns in rural areas. Anyone who has traveled in rural California can appreciate the extremes in road conditions and the considerable variation in topography. Other factors which contributed to delays were associated with waiting to see the physician during office hours, interruptions of the interview, and physicians extending the length of the interview. Although the schedule called for approximately half-hour interviews, the interviews actually averaged an hour or more in length because of the enthusiasm of many physicians. This meant that the time needed for interview write-up was increased because of greater content than anticipated.

10. APPENDIX 3: BIBLIOGRAPHY

Ackerson, Sarah B., and Raymond H. Murray. Indiana Physicians and Rural Health Care. Indianapolis, Indiana, Indiana University School of Medicine and Regenstrief Institute for Health Care, 1974.

American Family Physician/GP. "Family doctor making more, but working more", American Family Physician/General Practitioner, 1970, 2: 154--155.

American Medical Association. 1973 American Medical Directory. Part II: Geographical Register of Physicians. 26th ed. Chicago, Illinois, American Medical Association 1974.

Anderson, James G., and Harvey H. Marshall. "The structural approach to physician distribution: a critical evaluation", Health Services Research, 1974, 9: 195--207.

Bicknell, William J., et al. "Substantial or decorative? physicians' assistants and nurse practitioners in the United States", Lancet, 1974, ii: 1241--1244.

California Department of Health. Health Facilities Directory. Sacramento, California, Department of Health Facilities Licensing Section, 1975.

Chamberlain, Howard, and A. B. Drui. "Content of care in rural primary health care practices", Medical Care, 1975, 13: 230--240.

Champion, Dean J., and Donald B. Olsen. "Physician behavior in southern Appalachia: some recruitment factors", Journal of Health & Social Behavior, 1971, 12: 245--252.

Clute, Kenneth F. The General Practitioner: A Study of Medical Education and Practice in Ontario and Nova Scotia. Toronto, University of Toronto Press, 1963.

Cooper, James K., et al. "The decision for rural practice", Journal of Medical Education, 1972, 47: 939--944.

Cooper, James K., et al. "Rural or urban practice: factors influencing the location decision of primary care physicians", Inquiry, 1975, 12: 18--25.

Crawford, Ronald L., and Regina C. McCormack. "Reasons physicians leave primary practice", Journal of Medical Education, 1971, 46: 263--268.

Ehrenreich, Barbara and John. The American Health Empire: Power, Profits, and Politics. New York, Random House, 1970.

Fahs, Ivan J., and Osler L. Peterson. "Town without physicians and towns with only one -- a study of four states in the upper Midwest, 1965", American Journal of Public Health, 1968, 58: 1200--1211.

Fein, Rashi. The Doctor Shortage: An Economic Diagnosis. Washington, DC, the Brookings Institution, 1967.

Ginzberg, Eli. Men, Money and Medicine. New York, Columbia University Press, 1969.

Harvey, E. B. "The vanishing practitioner", Journal of Medical Education, 1973, 48: 718-724.

Hassinger, Edward W., et al. "Changes in number and location of health practitioners in a 20-county rural area of Missouri", Public Health Reports, 1975, 90: 313-318.

Hospitals, Journal of the American Hospital Association. Guide Issue -- Part 2. August 1, 1975, Vol. 49.

Hyde, D. R., et al. "The American Medical Association: power, purpose and politics in organized medicine", Yale Law Journal, 1954, 63: 938-1022.

Jones, Michael W. "California's physicians -- current information and recent trends". San Francisco, Cal., California Medical Association, Socio-Economic Report, Vol. 12, No. 7, 1972.

Jones, Michael W. "Physician supply -- an analysis of distribution in California". San Francisco, Cal., California Medical Association, Socio-Economic Report, Vol. 13, No. 2, 1973.

Kissick, William L. "Health manpower in transition", Milbank Memorial Fund Quarterly, 1968, 46 (Part 2): 53-90.

Lave, Judith R., et al. "Medical manpower models: need, demand and supply", Inquiry, 1975, 12: 97-125.

Martin, Edward D., et al. "Where graduates go", Journal of the Kansas Medical Society, 1968, 69: 84-89.

Mawardi, Betty Hosmer. "A career study of physicians". J. Medical Education, 1965, 40: 658 666.

Moore, Wilbert E. The Professions: Roles and Rules. New York, Russell Sage Foundation, 1970.

Morrison, Peter A. "The role of migration in California's growth", in Kingsley Davis and Frederick G. Styles, eds., California's Twenty Million: Research Contributions to Population Policy. Berkeley, Cal., Population Monograph Series No. 10, Institute of International Studies, University of California, 1971, pp. 33-60.

Mott, Frederick D., and Milton I. Roemer. Rural Health and Medical Care. New York, McGraw-Hill, 1948.

Parker, Ralph C., et al. "Social, economic, and demographic factors affecting physician population in upstate New York", New York State Journal of Medicine, 1969, 69: 706-712.

Peterson, Gary R. A Comparison of Selected Professional and Social Characteristics of Urban and Rural Physicians in Iowa. Iowa City, Graduate Program in Hospital and Health Administration, University of Iowa, 1968.

Peterson, O. L., et al. An Analytical Study of North Carolina General Practice, Journal of Medical Education, 1956, 31 (Part II).

Pomrinse, S. David, and Marcus S. Goldstein. "Group practice in the U.S.", Group Practice, 1960, 9: 845-859.

Reid, Richard A., et al. "Rural medical care: an experimental delivery system", American Journal of Public Health, 1975, 65: 266-271.

Riley, Gregory J., et al. "A study of family medicine in upstate New York", J. American Medical Association, 1969, 208: 2307-2314.

Robbins, Anthony. "Allied health manpower -- solution or problem?" New England Journal of Medicine, 1972, 286: 918-923.

Rushing, William A. Community, Physicians, and Inequality: A Sociological Study of the Maldistribution of Physicians. Lexington, Mass., D. C. Heath, 1975.

Rushmer, Robert F. Humanizing Health Care: Alternative Futures for Medicine. Cambridge, Mass., MIT Press, 1975.

Schonfeld, Hyman K., et al. "Numbers of physicians required for primary medical care", New England Journal of Medicine, 1972, 286: 571-576.

Steinwald, Bruce, and Carolynn Steinwald. "The effect of preceptorship and rural training programs on physicians' practice location decision", Medical Care, 1975, 13: 219-229.

Stevens, Rosemary. American Medicine and the Public Interest. New Haven, Yale University Press, 1971.

Stimmel, Barry. "The congress and health manpower: a legislative morass", New England Journal of Medicine, 1975, 293: 68-74.

Theodore, Christ N., and Gerald E. Sutter. "A report on the first periodic survey of physicians", J. American Medical Association, 1967, 202: 516-524.

U.S. Bureau of the Census. 1970 Census of Population, General Population Characteristics: California. Washington, DC, U.S. Government Printing Office, 1971.

University of Southern California Population Research Laboratory. "California's urban population: patterns and trends", in Kingsley Davis and Frederick G. Styles, eds., California's Twenty Million: Research Contribution to Population Policy. Berkeley, Cal., Population Monograph Series No. 10, Institution of International Studies, University of California, 1971, pp. 259-296.

Warner, Judith, and Phil Aherne, eds. Profile of Medical Practice. Chicago, Center for Health Services Research and Development, American Medical Association, 4th ed., 1974.

Williams, R. C., and W. E. Uzzell. "Attracting physicians to small communities", Hospitals, 1960, 34: 49-51.

ATTSCOR	=	Community Attraction Score
CLOSEFR	=	Close Friends Living in Community
CONTSCOR	=	Professional Contact Score
COVERAGE	=	Problem with Patient Coverage
CTACTINF	=	Contact with Other Doctors Is Informal
HOSFREQ	=	Hospital use Frequency
KEEPUPSC	=	Keeping up in Medicine Score
KEEPUPTK	=	Keeping up in Medicine by Talking to Other Physicians
LIKECOMM	=	Likes Community
LIKEECOL	=	Attraction of Community – Rural Physical Ecology
MALPR	=	Malpractice is Problem
NETINC	=	Net Income from Practice
OFFICEPR	=	Percent of Patient Care in Office
OUTBUS	=	Outside Business Activities (Not Involved with Medical Practice)
PATRUST	=	Attraction of Patients – Trusting, Cooperative
PARTSCOR	=	Community Social Life Participation Score
PATSEEN	=	Number of Patients Seen Daily
PROBSCOR	=	Medical Practice Problem Score
PROFISOL	=	Professional Isolation
RECSCOR	=	Recreation Score
REGION	=	Mountain or Valley Areas
SATSCOR	=	Medical Practice Satisfaction Score
SATWKAR	=	Satisfaction with Practice Related to Working Arrangements
SATPRL	=	Satisfaction with Practice Related to Personal Relations
STAFSIZE	=	Number of Personnel Working in Office
TOWNSPR	=	Number of Towns Practiced in
TRYANOPR	=	Tried Another Practice Arrangement
WIFEPT	=	Wife Participates in Community Social Life
YRSPRTW	=	Number of Years Practiced in Town
PTINST	=	Participates in Community Institutions